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Water Year 1980

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Towson, MD

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March 3, 1849

Water Resources Data for Maryland and Delaware

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MD-DE-80-1

WATER YEAR 1980

Prepared in cooperation with the States of Maryland and Delaware and with other agencies

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Water resources data for the 1980 water year for Maryland and Delaware consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality of ground-water wells. This volume contains records for water discharge at 110 gaging stations; stage and contents at 1 reservoir; water quality at 46 gaging stations and 19 wells; and water levels at 27 observation wells. Also included are data for 14 crest-stage, 56 low-flow, and 4 tidal crest-stage partial-record stations. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Maryland and Delaware.

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WATER YEAR 1980

Prepared in cooperation with the States of Maryland and Delaware and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Doyle G. Frederick, Acting Director

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1981

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PREFACE

This report was prepared by personnel of the Maryland, Delaware, District of Columbia district of the Water Resources Division of the U.S. Geological Survey under the supervision of Herbert J. Freiberger, District Chief, and J. E. Biesecker, Regional Hydrologist, Northeastern Region. It was done in cooperation with the States of Maryland and Delaware and with other agencies.

This report is one of a series issued by state. General direction for the series is by Philip Cohen, Chief Hydrologist, U.S. Geological Survey, and Robert J. Dingman, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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WATER RESOURCES DATA FOR MARYLAND AND DELAWARE, 1980

INTRODUCTION

Water resources data for the 1980 water year for Maryland and Delaware consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality of ground-water wells. This volume contains records for water discharge at 110 gaging stations; stage and contents at 1 reservoir; water quality at 46 gaging stations and 19 wells; and water levels at 27 observation wells. Also included are data for 14 crest-stage, 56 low-flow, and 4 tidal crest-stage partial-record stations. Locations of these sites are shown on figures 3 and 4. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Maryland and Delaware.

Records of discharge and stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from the Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, Virginia, 22202.

For water years 1961 through 1970, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 water year, water data for streamflow, water quality, and ground water are published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report MD-DE-80-1." These water-data reports are for sale, in paper copy or in microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia, 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (301) 828-1535.

COOPERATION

The U.S. Geological Survey and organizations of the State of Maryland have had cooperative agreements for the systematic collection of streamflow records from 1896 to 1909 and since 1924, for ground-water levels since 1943, and for water-quality records since 1958. Similar agreements between the Survey and organizations of the State of Delaware began in 1943 for streamflow records and in 1949 for water-quality records. Organizations that assisted in collecting data through cooperative agreements with the Survey are:

Maryland Geological Survey, K. N. Weaver, director.

Delaware Geological Survey, R. R. Jordan, State geologist.

Maryland State Highway Administration, M. S. Caltrider, administrator.

Maryland Department of Health and Mental Hygiene, Environmental Health Administration, William Eichbaum, assistant secretary.

District of Columbia Department of Environmental Services, William B. Johnson, acting director.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, for 21 gaging stations; by the Water Quality Office, Environmental Protection Agency, for 2 gaging stations; and by the National Park Service, U.S. Department of the Interior, for 1 station.

The following organizations aided in collecting records:

Delaware: State Department of Natural Resources and Environmental Control, and New Castle County.

Maryland: Maryland Water Resources Administration, Washington Suburban Sanitary Commission, Upper Potomac River Commission, Baltimore and Howard Counties, Potomac Electric Power Co., and Virginia Electric Power Co.

Organizations that supplied data are acknowledged in station descriptions.

ACKNOWLEDGMENT

Maryland and Delaware district personnel who contributed significantly to the collection and preparation of the data in this report were: R. W. James, Jr., Chief, Hydrologic Records and Information Section, David Grason, R. H. Simmons, B. M. Helinsky, M. N. Lys, D. F. Gillen, J. F. Hornlein, B. F. Strain, L. B. Maclin, and M. E. Walters.

HYDROLOGIC CONDITIONS

Streamflow was in the excessive range (upper 25 percent of record) throughout the bistate area as the 1980 water year began and generally remained in the excessive range through the spring. In June, streamflow returned to the normal range and continued in this range for the remainder of the water year.

Streamflow at the index station, Potomac River at Paw Paw, W. Va., averaged 4,460 ft^3/s (126 m^3/s), 135 percent of normal, reference period 1951-80. The average flow at the index station, Seneca Creek near Dawsonville, Md., was 158 ft^3/s (4.47 m^3/s), 171 percent of normal. Record monthly high flow was recorded in October. At the index station, Choptank River near Greensboro, Md., streamflow averaged 150 ft^3/s (4.25 m^3/s), 120 percent of normal, reference period 1951-80.

Average fresh-water inflow to the Chesapeake Bay was estimated at 85,500 ft^3/s (2,420 m^3/s) which is 113 percent of the long-term average, reference period 1952-80. Above-average inflows occurred throughout the first half of the water year.

Monthly flows at the index station, Potomac River near Washington, D.C., adjusted for diversions, were in the excessive range for October through January, April, and May. The yearly flow averaged 16,280 ft^3/s (461 m^3/s), 155 percent of normal.

Annual mean discharge is compared with the long-term average discharge for two representative gaging stations in figure 1. Data for the station, Potomac River at Point of Rocks, Md., reflects runoff conditions in the Potomac River basin, excluding the Coastal Plain. Data for the station, Choptank River at Greensboro, Md., reflects runoff from a 113 mi^2 (293 km^2) area, of which 21.6 mi^2 (34.8 km^2) is in Delaware in the central part of the Delmarva peninsula.

The combined storage in the three major water-supply reservoirs in the Baltimore City Municipal System was 100 percent of average on September 30, 1980, or about 73,700,000,000 gal (279 hm^3), a decrease of 16 percent from the end of last year and 86 percent of the usable capacity of 85,340,000,000 gal (323 hm^3).

At the end of the water year, water-level measurements indicated a drop in the water table throughout the bistate area, no doubt reflecting the period of below-normal precipitation. In the Appalachian region, this drop averaged 5.08 feet. In the Piedmont province, water levels dropped an average of 4.06 feet. In that part of the Coastal Plain west of Chesapeake Bay, drops averaged about 3.2 feet and in that part of the Coastal Plain east of Chesapeake Bay (the Eastern Shore), they averaged about 2.3 feet. Despite the general downward trend, no new record low levels were established in any of the water-table wells.

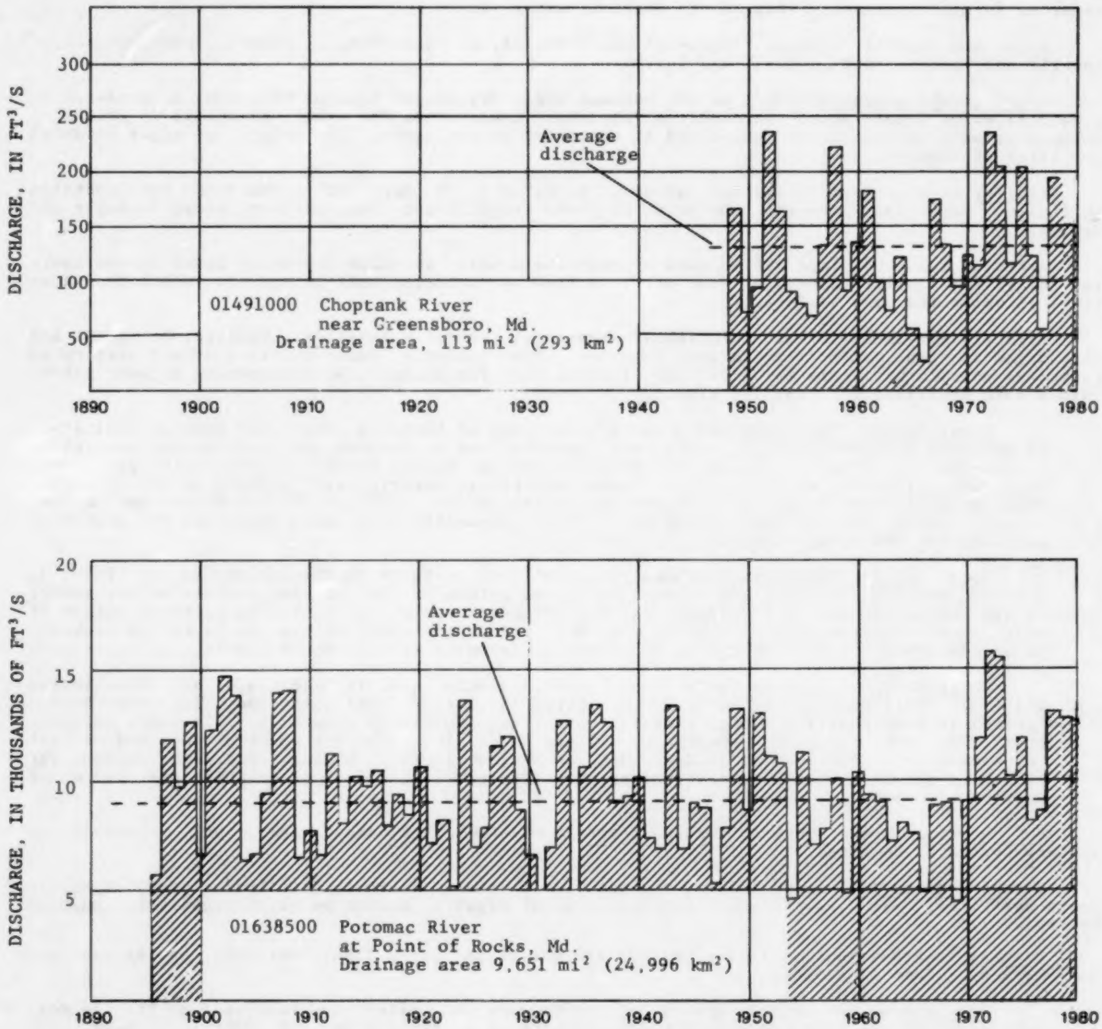


Figure 1.-- Annual mean discharge at two gaging stations in Maryland.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also the table for converting inch-pound units to International System of Units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is the primary energy donor in cellular life process. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as the organisms which produce colonies within 24 hours when incubated at 35°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°C on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash, and sediment in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (FT^3/S, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved constitutes that material in a representative water sample which passes through a 0.45 µm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = -\sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Land-surface datum is a datum plane that is approximately at the land surface at the well.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (µg/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L, and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m^2), acres, or hectares. Periphyton benthic organisms and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology.

The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024 - 0.004	Sedimentation.
Silt..........	.004 - .062	Sedimentation.
Sand..........	.062 - 2.0	Sedimentation or sieve.
Gravel........	2.0 - 64.0	Sieve.

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass, or volume.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells/mL of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells/mL of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/(m^2·time) for periphyton and macrophytes and mg C/(m^3·time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon-14 method is of greater sensitivity than the oxygen light-and-dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O_2/(m^2·time) for periphyton and macrophytes and mg O_2/(m^3·time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light-and-dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion are likely to produce different analytical results.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge in ft^3/s times mg/L times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry weight or volume, that passes a section during a given time.

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water per unit of time flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lived.

Natural substrates refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lived.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is that part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45 micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 μm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 μm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) *dissolved* and (2) *total* concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom.................Animal
Phylum..............Arthropoda
Class..................Insecta
Order............Ephemeroptera
Family.............Ephemeridae
Genus................*Hexageria*
Species......Hexagenia limbata

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge in ft^3/s, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

WDR is used as an abbreviation for "Water Data Report" in the REVISED RECORDS paragraph to refer to State annual basic-data reports.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indention in a list of stations in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 01477800, which appears just to the left of the station name, includes the 2-digit part number "01" plus the 6-digit downstream order number "477800."

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 2 below.

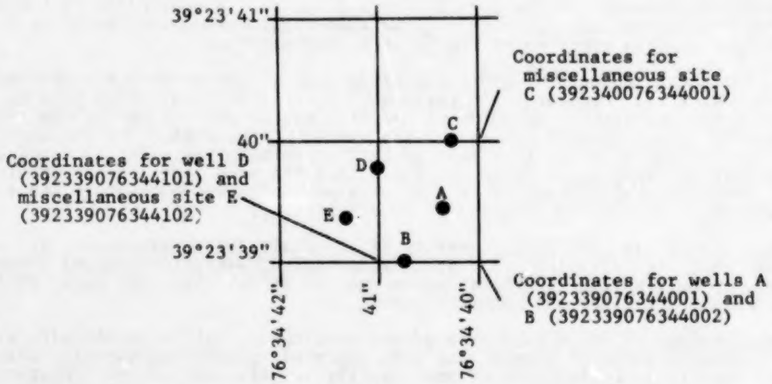

39°23'41"
Coordinates for miscellaneous site C (392340076344001)
C
40"
Coordinates for well D (392339076344101) and miscellaneous site E (392339076344102)
D
A
E
B
39°23'39"
Coordinates for wells A (392339076344001) and B (392339076344002)
76°34'42"
41"
76°34'40"

Figure 2. System for numbering wells and miscellaneous sites (latitude and longitude)

A second well-numbering system used in Maryland utilizes the county prefix and a 5-minute grid. The first 2 letters of the identification number are the county prefix; for example, for Charles County the prefix is CH. Each county is divided by 5-minute quadrangles of latitude and longitude. Each quadrangle is identified by 2 uppercase letters; the first designates north to south and the second, west to east. The wells are numbered serially within each quadrangle. A similar system used in Delaware divides the state, rather than the counties, by 5-minute quadrangles of latitude and longitude which are designated as explained above. Each 5-minute quadrangle is further subdivided by 1-minute quadrangles. Each of the 1-minute quadrangles from north to south is designated by a number from 1 to 5, and west to east by a number from 1 to 5. Thus ID 55-1 is the first well inventoried in the southeast 1-minute quad of the ID 5-minute quadrangle of Delaware.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data-collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables; then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by hydrologists and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

At some northern stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations, there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise, daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals, a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs, a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge or contents. The location of the gaging station and the drainage area are obtained from most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use, the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 6.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS." For reservoir stations, information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations, peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. If the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

Footnotes to the table of daily discharges are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and reservoirs, the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs, a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis but is not published for reservoirs for which only monthly data are given.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good," within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other data available

Information of a more detailed nature than that published for most of the gaging stations, such as discharge measurements, gage-height records, and rating tables is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

Records of discharge collected by agencies other than the Geological Survey

The National Water Data Exchange, Water Resources Division, U.S. Geological Survey, National Center, Reston, VA 22902, maintains an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records available at specific sites can be obtained upon request.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface-water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, water temperature, sediment discharge, etc.); extremes for the period of daily record; extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, date of sampling and/or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diel temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure 2.

Measurements are made in many types of wells under varying conditions of access and at different temperatures; hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will insure that measurements at each well are consistent.

Water-level measurements in this report are given in feet with reference to either National Geodetic Vertical Datum of 1929 (NGVD) or land-surface datum (lsd). National Geodetic Vertical Datum of 1929 (NGVD) is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above NGVD is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and at the end of each month (EOM).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.

3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4., Chapter B3. 1973. 15 pages.

4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

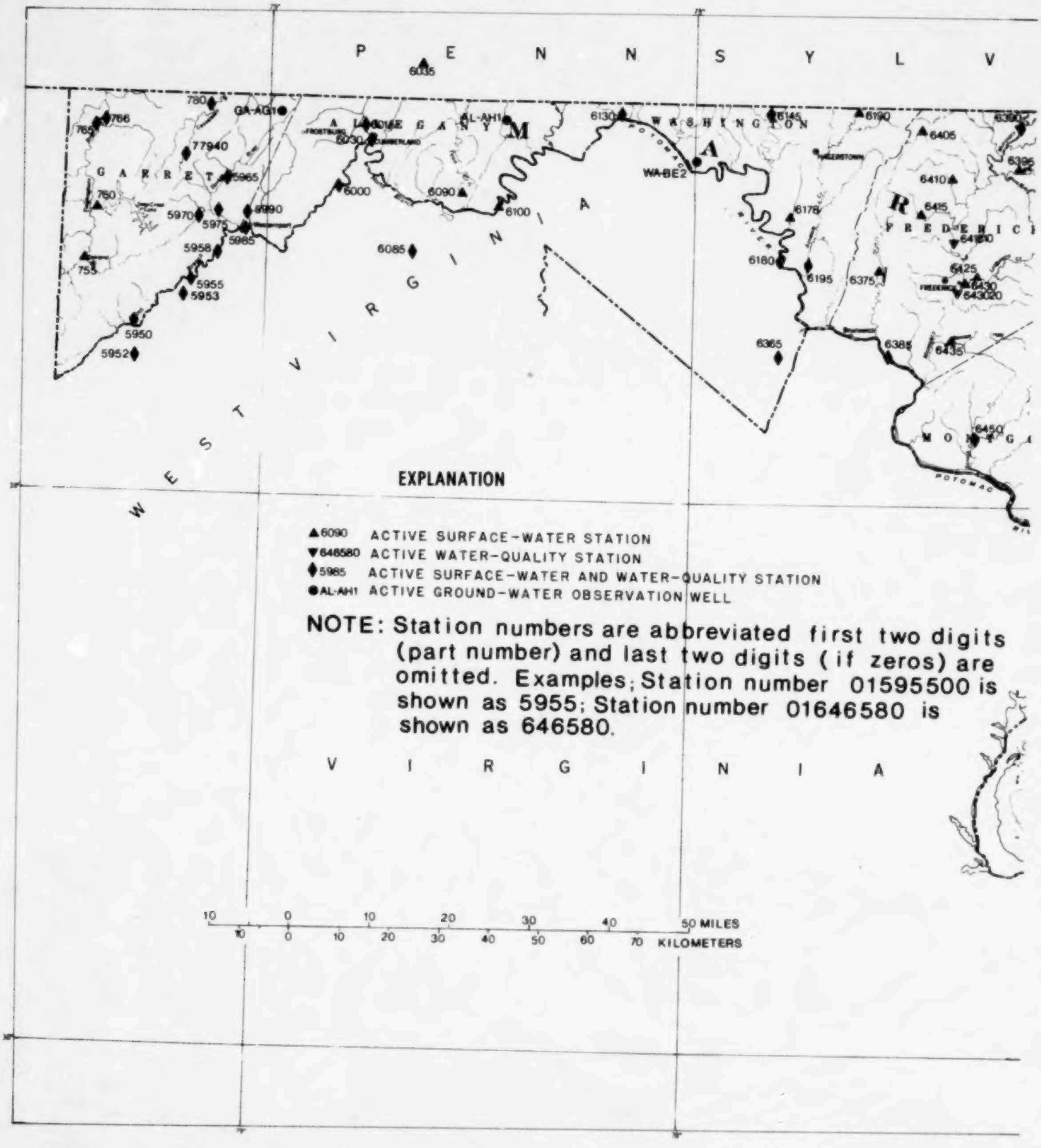
5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.

8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.



EXPLANATION

- ▲6090 ACTIVE SURFACE-WATER STATION
- ▼646580 ACTIVE WATER-QUALITY STATION
- ◆5985 ACTIVE SURFACE-WATER AND WATER-QUALITY STATION
- ●AL-AH1 ACTIVE GROUND-WATER OBSERVATION WELL

NOTE: Station numbers are abbreviated first two digits (part number) and last two digits (if zeros) are omitted. Examples; Station number 01595500 is shown as 5955; Station number 01646580 is shown as 646580.

Figure 3. Location of surface-water and water-quality stations and ground-water observation wells in Maryland and Delaware.

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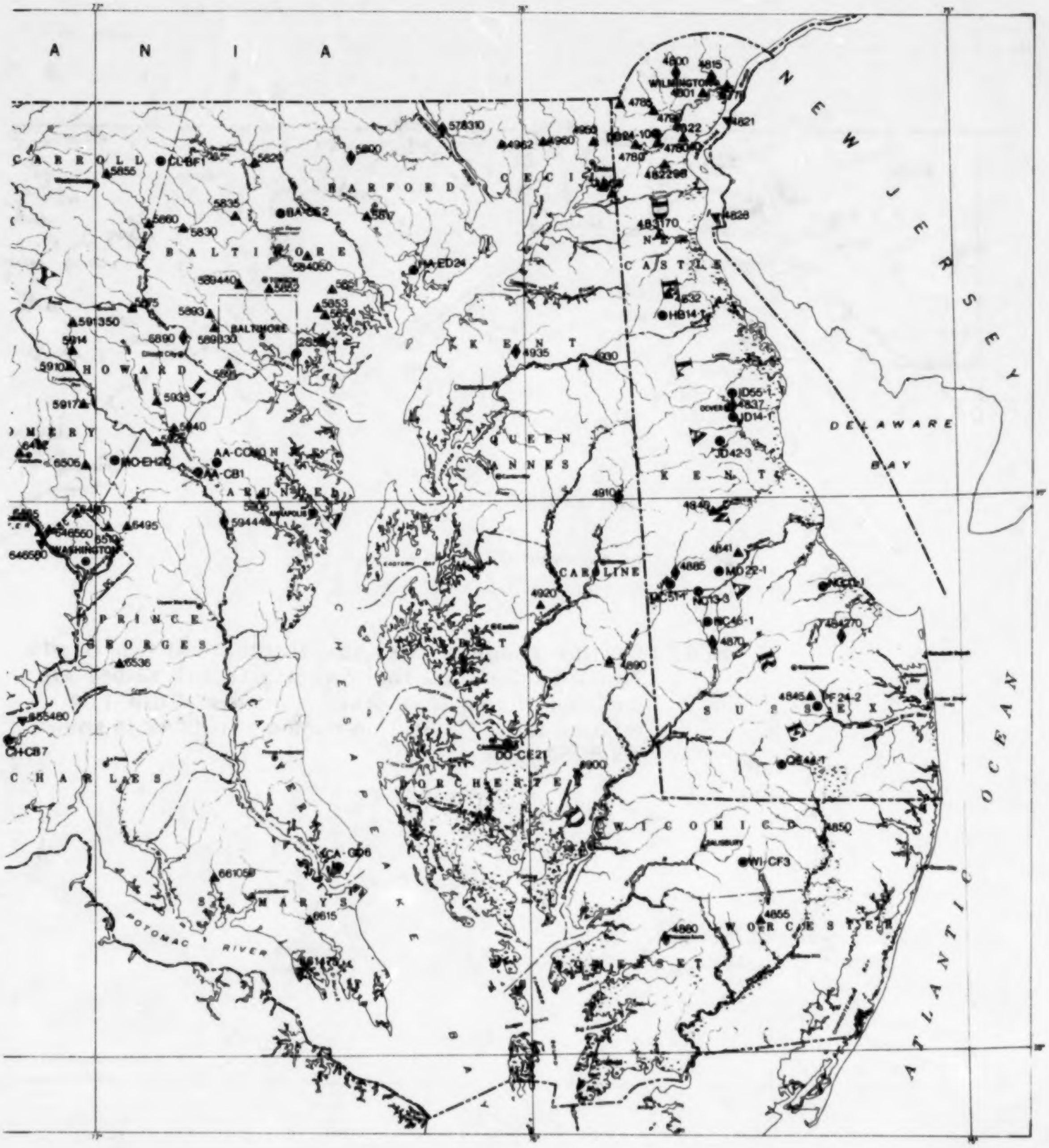
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594050
HA-ED24
589440
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5853
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589830
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5910
HOWARD
5895
5917
5935
5940
MERY
6505
MO-EH20
AA-CON N
AA-CB1
ARUNDEL
5905
ANNAPOLIS
594440
6495
646560
WASHINGTON
646580
PRINCE
GEORGES
6536
655480
CH-CB7
CHARLES
CALVERT
CA-GD6
661050
ST MARYS
6615
POTOMAC RIVER
CHESAPEAKE
BAY
4962
4960
4950
CECIL
4800
4815
WILMINGTON
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DB24-10
4780
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4828
NEW
CASTLE
4832
HB14-1
KENT
4935
4930
ID55-1
DOVER
4837
ID14-1
JD42-3
QUEEN
ANNES
KENT
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4841
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MD22-1
CAROLINE
NC13-3
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RC46-1
4870
484270
4890
4845
PF24-2
SUSSEX
DO-CE21
QE44-1
DORCHESTER
4900
WICOMICO
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WORCESTER
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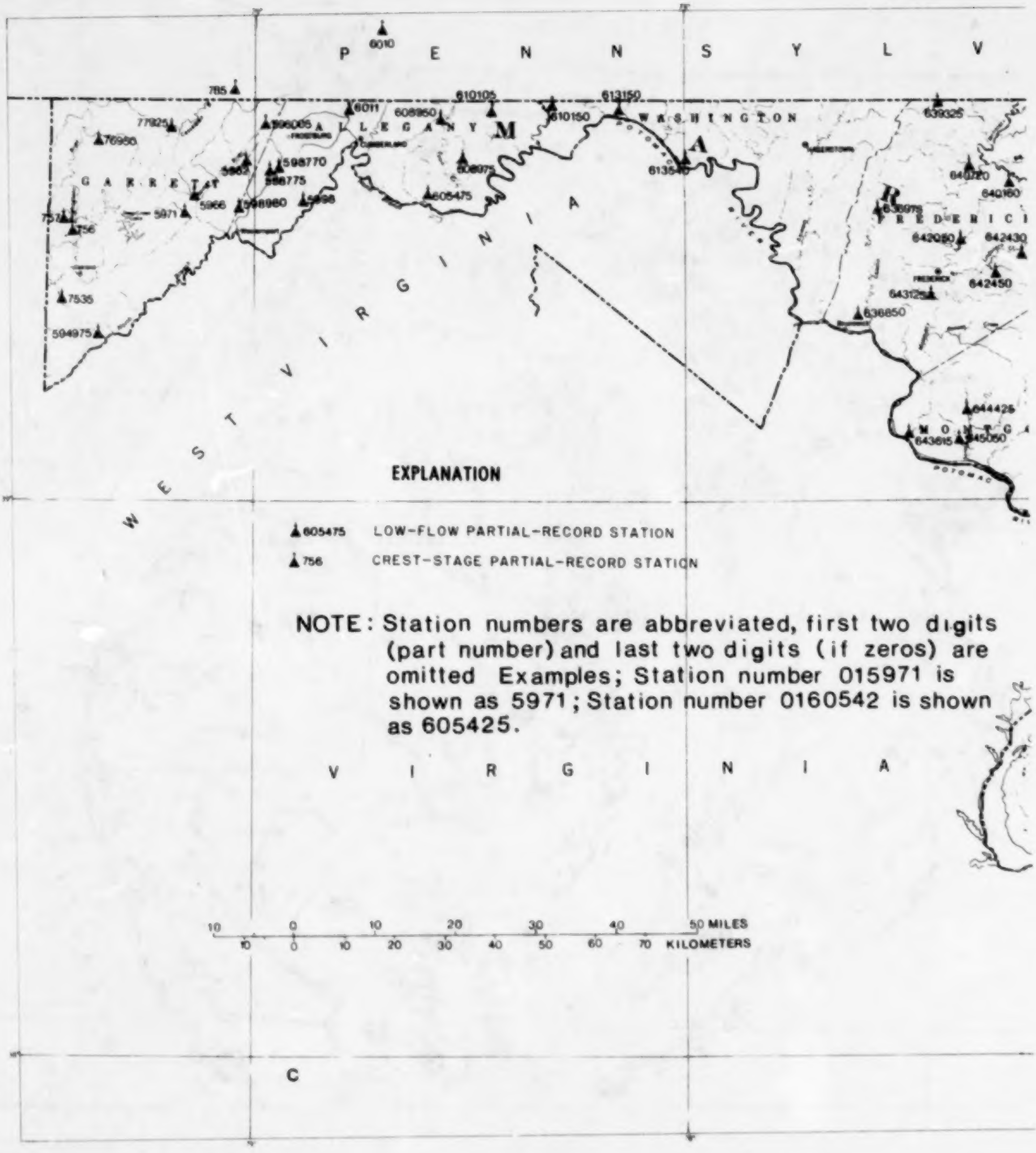
NEW JERSEY
DELAWARE
BAY
ATLANTIC OCEAN



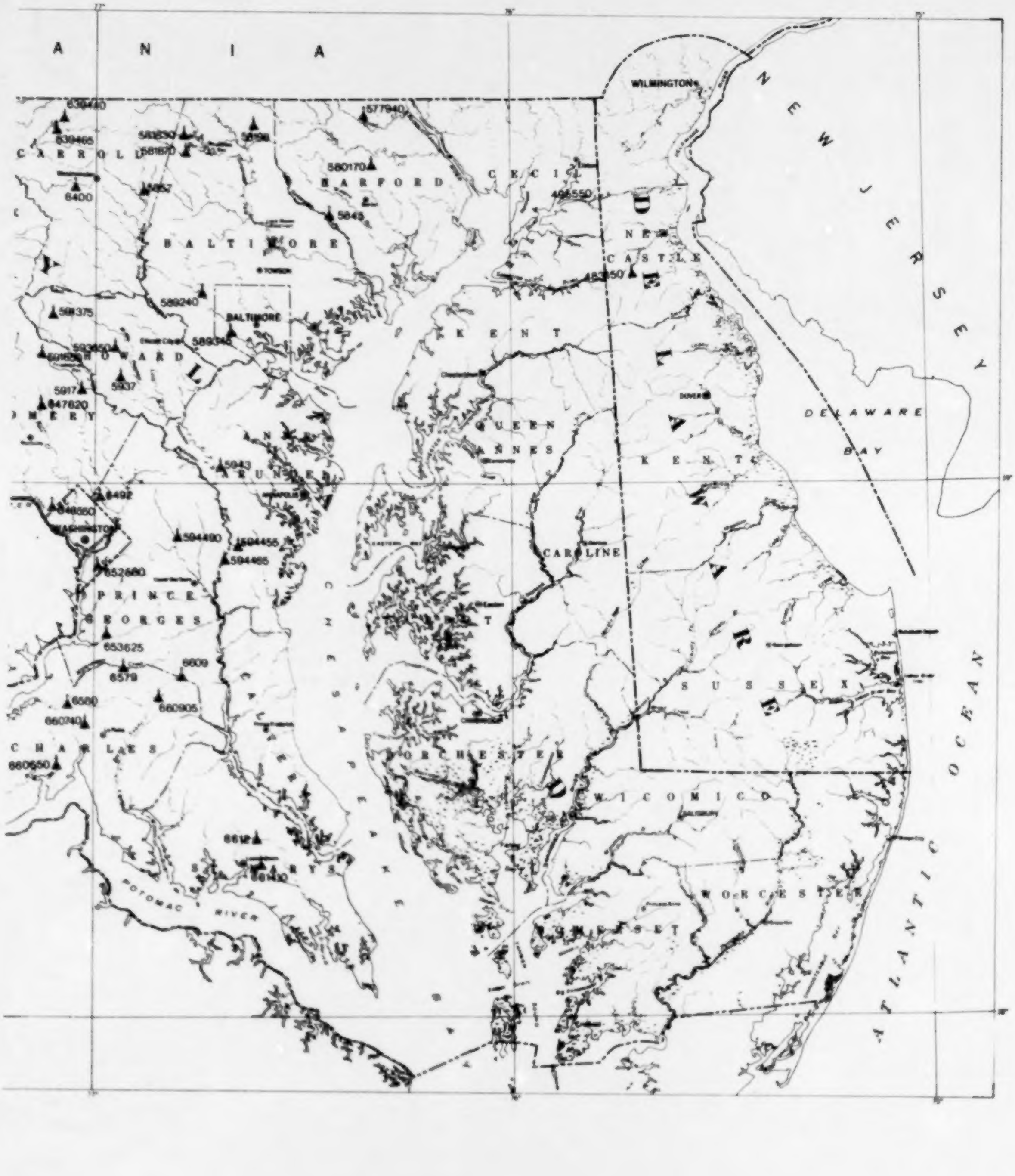
EXPLANATION

605475 LOW-FLOW PARTIAL-RECORD STATION

756 CREST-STAGE PARTIAL-RECORD STATION

NOTE: Station numbers are abbreviated, first two digits (part number) and last two digits (if zeros) are omitted Examples; Station number 015971 is shown as 5971; Station number 0160542 is shown as 605425.

Figure 4. Location of low-flow and crest-stage partial record staions in Maryland and Delaware.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BALTIMORE
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HOWARD
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MERY
WILMINGTON
NEW CASTLE
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DEL
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KENT
QUEEN ANNES
DOVER
KENT
DELAWARE BAY
5943
ANNE ARUNDEL
6492
646560
WASHINGTON
594490
594455
594465
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CHARLES
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CALVERT
CAROLINE
CHESAPEAKE BAY
SUSSEX
DORCHESTER
WICOMICO
ATLANTIC OCEAN
6612
ST. MARYS
661410
POTOMAC RIVER
WORCESTER
SOMERSET

NORTH ATLANTIC SLOPE BASINS

DELAWARE RIVER BASIN

01477800 SHELLPOT CREEK AT WILMINGTON, DE

LOCATION.--Lat 39°45'39", long 75°31'10", New Castle County, Hydrologic Unit 02040205, on right bank 100 ft (30 m) east of intersection of 44th and Pine Streets in Clifton Park, 700 ft (213 m) downstream from bridge on North Market Street in Wilmington, 0.2 mi (0.3 km) downstream from Matson Run, and 2.3 mi (3.7 km) upstream from mouth.

DRAINAGE AREA.--7.46 mi² (19.32 km²).

PERIOD OF RECORD.--December 1945 to current year.

REVISED RECORDS.--WSP 1382: 1948(m).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 15.16 ft (4.621 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for August and September, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--34 years (water years 1947-80), 9.73 ft³/s (0.276 m³/s), 17.71 in/yr (450 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,850 ft³/s (194 m³/s) Sept. 13, 1971, gage height, 11.91 ft (3.630 m), from rating curve extended above 620 ft³/s (17.6 m³/s) on basis of computation of flow over dam at gage height 6.52 ft (1.987 m); contracted-opening measurements at gage heights 6.52 ft (1.987 m), 7.97 ft (2.429 m), and 8.6 ft (2.62 m), from floodmarks; type V culvert measurement at 9.10 ft (2.774 m); and contracted-opening measurement of peak flow; minimum daily, 0.09 ft³/s (0.003 m³/s) Oct. 2, 4, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1940, that of Sept. 13, 1971. Flood of Aug. 1, 1945, reached a stage of about 8.5 ft (2.59 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft³/s (15 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 26	1115	*1200	34.0	4.74	1.445	Mar. 21	1215	650	18.4	3.77	1.149

Minimum daily discharge, 0.10 ft³/s (0.003 m³/s) Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	3.1	2.7	2.6	2.5	1.6	44	45	11	1.6	49	.27
2	5.9	3.7	2.5	2.6	2.5	1.9	13	9.4	2.2	1.3	3.2	.23
3	7.7	40	2.4	2.5	2.5	2.0	9.1	6.4	4.3	1.4	3.6	.20
4	2.6	6.0	2.6	2.4	2.6	2.3	41	5.2	2.8	1.6	1.7	.20
5	19	4.1	2.5	2.7	2.6	5.9	11	4.5	1.4	1.1	.80	.47
6	4.5	3.7	5.6	2.6	2.5	3.2	7.4	3.9	1.5	2.0	.88	.35
7	2.4	3.5	6.9	2.9	2.5	2.2	6.4	4.9	2.4	.82	.65	.27
8	3.2	3.3	2.7	3.0	2.5	6.0	5.9	10	10	.74	.58	.25
9	7.5	3.3	2.4	2.9	2.5	6.4	61	3.8	2.4	.82	.47	.20
10	100	8.6	2.4	2.6	2.3	12	38	3.2	5.5	7.1	.82	.15
11	12	19	2.3	65	2.5	20	8.3	3.8	2.1	1.2	4.4	.10
12	14	26	2.3	35	2.2	3.8	6.3	12	1.5	.97	5.2	.20
13	9.5	6.1	17	6.1	2.3	46	5.6	26	1.3	.72	.72	.20
14	5.2	6.1	5.6	6.0	2.3	64	11	4.6	1.3	.58	.28	.20
15	4.3	4.4	3.2	5.0	2.3	13	17	3.2	9.4	.47	.31	.20
16	3.8	4.5	3.4	4.1	10	6.9	5.7	2.8	17	7.4	.35	.15
17	3.5	3.8	5.0	3.6	3.1	9.0	4.6	2.9	2.0	2.8	.28	.15
18	3.4	3.4	2.7	15	2.5	19	4.3	20	1.5	2.3	.28	38
19	3.2	2.9	2.7	19	2.0	5.5	4.0	4.4	1.4	.88	.38	1.4
20	3.3	2.9	2.8	5.5	1.9	4.4	3.8	3.2	1.2	.72	.31	.35
21	3.7	2.8	3.0	4.4	2.1	111	3.6	13	1.1	2.9	.28	.80
22	3.7	2.8	4.3	9.9	8.7	14	3.3	4.3	1.1	7.9	.28	.58
23	4.3	2.0	4.2	9.7	5.1	6.6	3.1	3.0	1.2	5.8	.27	.38
24	14	1.6	4.1	4.3	3.1	12	3.1	2.7	1.3	1.3	.25	.31
25	3.8	1.5	30	4.0	2.6	61	3.1	2.6	1.0	.72	.25	7.8
26	3.4	166	5.7	4.0	2.2	10	3.1	2.1	.99	.58	.22	1.2
27	3.3	12	3.9	3.7	1.9	7.2	14	1.9	1.1	.65	.24	.58
28	6.9	5.1	3.3	3.7	2.0	6.5	39	1.8	2.5	.65	.21	.52
29	4.3	3.8	3.0	3.3	1.8	72	38	1.8	29	11	.25	.47
30	3.3	3.0	3.0	2.7	---	18	65	1.7	17	1.2	.29	.43
31	3.3	---	2.8	2.7	---	127	---	16	---	.65	.30	---
TOTAL	383.0	359.0	147.0	243.5	85.6	680.4	482.7	230.1	138.49	69.87	77.05	56.61
MEAN	9.77	12.0	4.74	7.85	2.95	21.9	16.1	7.42	4.62	2.25	2.49	1.89
MAX	100	166	30	65	10	127	65	45	29	11	49	38
MIN	2.4	1.5	2.3	2.4	1.8	1.6	3.1	1.7	.99	.47	.21	.10
CFSM	1.31	1.61	.64	1.05	.40	2.94	2.16	1.00	.62	.30	.33	.25
IN.	1.51	1.79	.73	1.21	.43	3.39	2.41	1.15	.69	.35	.38	.28

CAL YR 1979 TOTAL 4862.91 MEAN 13.3 MAX 322 MIN .74 CFSM 1.78 IN 24.25
WTR YR 1980 TOTAL 2873.32 MEAN 7.85 MAX 166 MIN .10 CFSM 1.05 IN 14.33

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01478000 CHRISTINA RIVER AT COOCHS BRIDGE, DE

LOCATION.--Lat 39°38'14", long 75°43'43", New Castle County, Hydrologic Unit 02040205, on right bank 60 ft (18 m) downstream from highway bridge, 0.5 mi (0.8 km) southeast of Coochs Bridge, 3.6 mi (5.8 km) upstream from Belltown Run, 3.3 mi (5.3 km) south of Newark, and 22.6 mi (36.4 km) upstream from mouth.

DRAINAGE AREA.--20.5 mi² (53.1 km²).

PERIOD OF RECORD.--April 1943 to current year.

REVISED RECORDS.--WDR MD-DE-79-1: 1943-70 (P).

GAGE.--Water-stage recorder. Datum of gage is 25.54 ft (7.78 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 14, 1944, nonrecording gage on upstream side of bridge at same datum. Sept. 14, 1944, to May 13, 1969, recording gage at site on left bank at downstream side of highway bridge at same datum. May 26, 1969, to Dec. 5, 1973, recording gage on left bank 82 ft (25 m) downstream from highway bridge at same datum.

REMARKS.--Records good. Low and medium flow regulated by mill above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 28.6 ft³/s (0.810 m³/s), 18.95 in/yr (481 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,320 ft³/s (94.0 m³/s) June 22, 1972, gage height, 11.35 ft (3.459 m); maximum gage height, 12.41 ft (3.783 m) May 2, 1947; minimum daily discharge, 0.2 ft³/s (0.006 m³/s) Aug. 7, 14, 18, 21, 27, 28, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,180 ft³/s (61.7 m³/s) Nov. 26, gage height 10.57 ft (3.222 m); no other peak above base of 1,000 ft³/s (28 m³/s); minimum daily discharge, 0.65 ft³/s (0.018 m³/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	5.7	13	12	14	7.2	189	233	6.9	6.4	4.5	1.7
2	53	9.5	13	13	13	8.9	69	72	7.3	6.1	2.6	3.5
3	105	211	13	12	11	11	37	61	5.2	5.8	31	3.1
4	16	34	15	13	11	11	110	33	6.4	5.2	9.5	2.7
5	12	16	13	11	11	19	44	27	4.9	4.5	2.5	.65
6	19	9.6	20	12	11	17	24	22	6.4	4.2	2.5	1.6
7	7.8	12	47	13	12	13	22	22	11	5.4	2.1	2.3
8	8.6	8.2	14	13	9.5	26	21	34	40	3.5	4.1	2.1
9	9.3	11	13	13	11	59	178	22	7.0	4.8	2.9	2.0
10	363	67	18	12	11	20	144	20	15	3.1	1.3	2.4
11	90	83	11	120	11	114	38	17	8.8	5.2	5.0	2.2
12	47	167	12	250	11	18	24	25	5.7	2.9	8.9	2.0
13	54	29	85	32	9.9	116	21	63	6.6	3.2	5.9	2.0
14	13	29	61	21	12	350	38	21	4.4	4.9	3.0	2.4
15	12	13	16	14	12	89	62	17	21	2.6	3.0	2.9
16	9.2	13	15	13	27	31	22	15	68	3.2	3.5	2.2
17	8.1	13	23	13	16	36	19	13	7.7	12	1.8	2.1
18	8.1	12	11	82	8.8	93	17	67	5.7	4.8	5.2	46
19	8.1	14	12	199	10	24	16	19	5.1	4.3	12	3.9
20	7.9	10	15	39	10	20	15	13	4.9	2.8	4.8	2.9
21	8.2	11	11	22	11	294	15	31	4.9	6.0	5.5	2.7
22	8.9	10	11	45	64	119	14	13	3.8	28	4.7	2.8
23	13	11	13	87	29	33	13	9.5	5.2	45	3.8	2.7
24	116	12	14	23	16	33	13	8.3	3.1	13	2.0	2.3
25	13	9.7	154	17	15	191	12	8.9	4.4	5.5	5.0	13
26	11	611	38	17	12	37	12	7.7	3.8	3.3	2.2	4.5
27	7.6	135	17	14	12	25	34	7.1	4.8	2.2	4.0	2.8
28	9.6	53	16	17	12	20	150	6.6	3.8	4.7	3.5	2.6
29	10	21	13	16	11	351	251	6.2	66	1.8	2.1	2.7
30	7.9	21	13	13	---	116	157	6.4	64	4.7	3.2	2.7
31	9.8	---	14	14	---	375	---	9.2	---	1.4	2.2	---
TOTAL	1266.1	1661.9	754	1192	424.2	2677.1	1781	929.9	412.6	210.5	154.2	129.35
MEAN	40.8	55.4	24.3	38.5	14.6	86.4	59.4	30.0	13.8	6.79	4.97	4.31
MAX	363	611	154	250	64	375	251	233	68	45	31	46
MIN	7.6	5.7	11	11	8.8	7.2	12	6.2	3.1	1.4	1.3	.65
CFSM	1.99	2.70	1.19	1.88	.71	4.22	2.90	1.46	.67	.33	.24	.21
IN.	2.30	3.02	1.37	2.16	.77	4.86	3.23	1.69	.75	.38	.28	.23

CAL YR 1979 TOTAL 19711.00 MEAN 54.0 MAX 1600 MIN 2.7 CFSM 2.63 IN 35.77
WTR YR 1980 TOTAL 11592.85 MEAN 31.7 MAX 611 MIN .65 CFSM 1.55 IN 21.04

01478040 CHRISTINA RIVER NEAR BEAR, DE

LOCATION.--Lat 39°38'12", long 75°40'53", New Castle County, Hydrologic Unit 02040205, on right bank 500 ft (152 m) upstream from highway bridge, 1.3 mi (2.1 km) northwest of Bear, 1.6 mi (2.6 km) downstream from Belltown Run, and 17.7 mi (28.5 km) upstream from mouth.

DRAINAGE AREA.--40.6 mi^2 (105.2 km^2).

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 12 ft (3.7 m), from topographic map.

REMARKS.--Records good except those for the period July 10 to Aug. 20, which are poor. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,360 ft^3/s (95.2 m^3/s) Feb. 25, 1979, gage height, 10.95 ft (3.338 m); minimum daily, 1.8 ft^3/s (0.051 m^3/s) Sept. 6, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,610 ft^3/s (45.6 m^3/s) Nov. 26, gage height, 8.31 ft (2.533 m), no other peak above base of 1,500 ft^3/s (42 m^3/s); minimum daily discharge, 1.8 ft^3/s (0.051 m^3/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	17	34	26	29	20	484	504	21	16	9.0	4.0
2	282	21	35	26	19	16	102	114	20	14	6.0	4.5
3	77	154	31	25	18	19	72	78	14	14	40	4.3
4	52	84	32	25	18	19	124	57	17	16	20	4.7
5	29	42	30	26	19	31	92	45	13	14	10	4.0
6	41	27	30	27	18	42	60	36	16	12	9.0	1.8
7	23	29	68	28	20	27	52	33	17	13	6.0	2.8
8	23	22	40	28	18	29	48	51	93	9.6	9.0	3.2
9	17	25	32	28	20	70	119	40	52	10	3.5	3.0
10	292	41	32	27	19	42	258	34	34	9.0	9.0	2.9
11	337	60	28	200	20	94	84	28	30	12	10	3.5
12	76	191	28	350	21	43	60	33	18	8.4	18	3.6
13	93	72	59	70	17	57	52	63	18	9.0	12	2.8
14	49	57	93	56	20	599	53	38	12	11	8.0	2.7
15	35	40	45	46	18	166	86	27	16	6.0	8.0	3.5
16	24	37	37	38	34	67	57	24	113	9.0	9.0	3.5
17	23	34	41	36	34	58	44	22	44	20	4.0	2.9
18	22	31	30	47	23	92	37	66	22	14	7.0	37
19	21	31	26	286	20	59	36	56	18	10	25	9.0
20	20	26	30	79	18	47	33	40	16	6.0	12	5.1
21	20	27	27	53	22	227	34	68	16	10	9.1	4.3
22	21	25	26	48	49	308	30	50	12	50	7.7	4.2
23	19	26	31	96	64	73	28	31	15	70	7.1	4.0
24	86	27	33	55	44	58	27	23	11	30	4.7	3.5
25	39	24	142	37	37	251	26	23	13	10	5.9	9.1
26	27	427	86	34	26	87	26	20	13	7.0	5.1	8.7
27	21	584	46	29	25	63	60	19	13	6.0	5.6	4.9
28	20	92	39	33	21	47	128	18	16	10	6.3	3.9
29	26	56	30	28	20	438	470	15	102	4.0	4.8	3.8
30	20	46	31	23	---	304	163	17	34	9.0	5.1	3.8
31	22	---	30	22	---	365	---	22	---	3.5	4.7	---
TOTAL	2004	2375	1302	1932	731	3818	2945	1695	849	442.5	300.6	159.0
MEAN	64.6	79.2	42.0	62.3	25.2	123	98.2	54.7	28.3	14.3	9.70	5.30
MAX	337	584	142	350	64	599	484	504	113	70	40	37
MIN	17	17	26	22	17	16	26	15	11	3.5	3.5	1.8
CFSM	1.59	1.95	1.03	1.53	.62	3.03	2.42	1.35	.70	.35	.24	.13
IN.	1.84	2.18	1.19	1.77	.67	3.50	2.70	1.55	.78	.41	.28	.15

CAL YR 1979 TOTAL 31019.1 MEAN 85.0 MAX 2530 MIN 7.6 CFSM 2.09 IN 28.42
WTR YR 1980 TOTAL 18553.1 MEAN 50.7 MAX 599 MIN 1.8 CFSM 1.25 IN 17.00

01478500 WHITE CLAY CREEK ABOVE NEWARK, DE

LOCATION.--Lat 39°42'52", long 75°45'34", New Castle County, Hydrologic Unit 02040205, on right bank at downstream wingwall of abandoned bridge, 0.9 mi (1.4 km) downstream from small tributary, 1.7 mi (2.7 km) southeast of Delaware-Maryland-Pennsylvania State corner, 2.1 mi (3.4 km) downstream from Pennsylvania-Delaware State line, 2.2 mi (3.5 km) north of Newark, and 12.8 mi (20.6 km) upstream from mouth.

DRAINAGE AREA.--66.7 mi^2 (172.8 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1952 to September 1959, July 1962 to January 1980 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 78.6 ft (24.0 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Records do not include a negligible diversion above station by plant of E. I. du Pont de Nemours & Co. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years (water years 1953-59, 1963-79), 87.1 ft^3/s (2.467 m^3/s), 17.73 in/yr (450 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft^3/s (289 m^3/s) June 22, 1972, gage height, 13.77 ft (4.197 m), from rating curve extended above 1,800 ft^3/s (51.0 m^3/s) on basis of contracted-opening measurements at gage heights 9.97 ft (3.039 m) and 13.77 ft (4.197 m); minimum, 4.6 ft^3/s (0.13 m^3/s) Dec. 7, 1954, gage height, 0.55 ft (0.168 m), result of freezeup; minimum daily, 5.6 ft^3/s (0.16 m^3/s) Sept. 10, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October 1979 to January 1980, 948 ft^3/s (26.8 m^3/s) Nov. 26, gage height, 4.07 ft (1.241 m), no peak above base of 1,500 ft^3/s (42 m^3/s); minimum daily discharge, 69 ft^3/s (1.95 m^3/s) Jan. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO JANUARY 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	257	86	90	79								
2	140	87	88	78								
3	193	291	85	78								
4	109	122	85	77								
5	181	97	85	78								
6	157	90	86	70								
7	98	88	102	83								
8	89	85	86	70								
9	90	84	82	69								
10	464	176	82	69								
11	188	129	81	131								
12	144	189	81	237								
13	147	114	115	93								
14	112	108	112	88								
15	102	97	87	87								
16	98	95	86	81								
17	95	90	86	---								
18	92	88	78	---								
19	90	85	78	---								
20	89	85	80	---								
21	88	83	79	---								
22	88	83	82	---								
23	88	84	85	---								
24	164	83	85	---								
25	101	83	192	---								
26	92	359	107	---								
27	89	174	91	---								
28	98	114	86	---								
29	102	100	83	---								
30	90	93	82	---								
31	87	---	81	---								
TOTAL	4022	3542	2808	---								
MEAN	130	118	90.6	---								
MAX	464	359	192	---								
MIN	87	83	78	---								
CFSM	1.95	1.77	1.36	---								
IN.	2.24	1.98	1.57	---								

CAL YR 1979 TOTAL 49562 MEAN 136 MAX 3000 MIN 42 CFSM 2.04 IN 27.64

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV 02...	1200	86	258	7.4	24.0	12.0	11.9	89	22	8.2	7.9

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)
NOV 02...	16	.4	3.4	23	12	10	134	.18	31.1	4.2	.01

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)
NOV 02...	4.2	.03	.04	.27	0	4.5	20	.030	.09	.09

DATE	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
NOV 02...	.03	3	6	0	38	12	17	0	18	.01

01478500 WHITE CLAY CREEK ABOVE NEWARK, DE--Continued

BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1979 TO NOVEMBER 1979

DATE		NOV 2,79
TIME		1200
TOTAL COUNT		90
DIVERSITY:	PHYLUM	0.3
	.CLASS	0.3
	..ORDER	1.2
	...FAMILY	1.7
	....GENUS	2.1
	....GENUS-INSECTA	1.8

ORGANISM	COUNT
ANNELIDA	
.OLIGOCHAETA	
..PLESIOPORA	
...NAIDIDAE	
....UNKNOWN GENUS	4
ARTHROPODA (ARTHROPODS)	
.INSECTA	
..DIPTERA	
...CHIRONOMIDAE	
....CARDIOCLADIUS	1
....CRICOTOPUS	57
....RHEOTANYTARSUS	3
...EMPIDIDAE	
....HEMERODROMIA	1
...TIPULIDAE	
....ANTOCHA	3
..EPHEMEROPTERA	
...BAETIDAE	
....PSEUDOCLOEON	3
..TRICHOPTERA	
...HYDROPSYCHIDAE	
....CHEUMATOPSYCHE	1
....HYDROPSYCHE	1
....SYMPHITOPSYCHE	9
...HYDROPTILIDAE	
....LEUCOTRICHIA	6
MOLLUSCA (MOLLUSCS)	
.GASTROPODA	
..BASOMMATOPHORA	
...ANCYLIDAE	
....FERRISSIA	1

01479000 WHITE CLAY CREEK NEAR NEWARK, DE

LOCATION.--Lat 39°41'57", long 75°40'33", New Castle County, Hydrologic Unit 02040205, on left bank 35 ft (11 m) downstream from bridge on private road owned by Delaware Racing Association, 0.4 mi (0.6 km) downstream from the Baltimore and Ohio Railroad bridge, 1.1 mi (1.8 km) downstream from Pike Creek, 3.8 mi (6.1 km) east of Newark, and 5.0 mi (8.0 km) upstream from mouth. Prior to April 8, 1976, at site 0.5 mi (0.8 km) upstream.
DRAINAGE AREA.--89.1 mi^2 (230.8 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1931 to September 1936, June 1943 to September 1957, October 1959 to current year. Monthly discharge only for some periods, published in WSP 1302.
REVISED RECORDS.--WSP 1051: 1933(M). WSP 1382: 1932, 1934.
GAGE.--Water-stage recorder. Datum of gage is 9.00 ft (2.74 m) National Geodetic Vertical Datum of 1929. Nov. 17, 1931, to Sept. 30, 1936, June 4, 1943, to Sept. 30, 1957, and Oct. 1, 1959, to Apr. 7, 1976, at site 0.5 mi (0.8 km) upstream at datum 2.6 ft (0.792 m) higher.
REMARKS.--Water-discharge records fair. Slight diurnal fluctuation at low flow caused by mills above station. Records do not include a negligible diversion above station by E. I. du Pont de Nemours & Co. Several observations of water temperature were made during the year.
AVERAGE DISCHARGE.--40 years (water years 1932-36, 1944-57, 1960-80), 115 ft^3/s (3.257 m^3/s), 17.53 in/yr (445 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,080 ft^3/s (257 m^3/s) June 22, 1972, gage height, 15.91 ft (4.849 m), present datum, from rating curve extended above 6,000 ft^3/s (170 m^3/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 4.7 ft^3/s (0.13 m^3/s) Sept. 11, 1966; minimum daily, 5.0 ft^3/s (0.14 m^3/s) Sept. 10, 1966.
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 23 ft (7 m), previous site and datum, in July 1937 (probably affected by backwater from railroad bridge which has since been raised and widened), from information by Baltimore & Ohio Railroad.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (56 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 26	1630	*2410	68.3	11.26	3.432	Mar. 21	1900	2000	56.6	10.74	3.274

Minimum daily discharge, 24 ft^3/s (0.68 m^3/s) Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	402	93	126	90	86	80	509	565	115	82	66	40
2	175	94	122	88	85	80	207	225	101	73	64	34
3	206	375	119	88	84	80	163	195	95	72	63	32
4	125	142	117	85	84	86	224	163	96	72	58	31
5	181	113	116	87	83	93	156	148	90	67	54	31
6	199	107	118	85	82	92	134	141	87	65	53	32
7	109	104	130	85	82	83	128	138	90	61	52	31
8	99	100	116	83	81	92	124	158	165	60	51	29
9	101	99	110	82	80	104	235	139	108	61	51	28
10	711	181	110	82	80	92	217	130	117	83	50	27
11	234	159	107	188	80	110	137	127	101	65	62	26
12	152	228	107	363	79	91	126	141	89	61	68	26
13	155	128	143	116	79	164	122	222	84	58	55	27
14	119	120	139	106	78	421	130	142	82	56	51	26
15	110	110	110	104	77	186	159	127	89	55	51	26
16	104	107	108	97	86	153	124	119	162	62	51	25
17	101	103	109	94	98	131	116	116	98	134	48	25
18	99	101	98	128	90	180	114	182	84	65	46	56
19	96	98	98	222	81	120	111	147	81	60	51	30
20	96	97	97	112	79	107	110	127	79	58	49	27
21	96	96	97	101	79	678	107	154	75	57	45	27
22	94	96	98	105	102	290	103	135	73	87	44	27
23	95	96	101	114	98	151	102	119	72	181	43	26
24	189	95	100	96	91	143	101	114	69	111	42	24
25	109	95	220	92	87	280	102	113	69	67	40	35
26	99	841	124	92	84	143	101	106	68	61	39	31
27	96	280	106	90	80	126	126	100	67	60	38	27
28	102	162	101	90	80	119	327	98	73	57	38	26
29	109	139	97	88	80	408	617	95	165	59	34	26
30	96	130	94	87	---	194	326	95	182	57	36	26
31	94	---	92	86	---	803	---	101	---	55	36	---
TOTAL	4753	4689	3530	3426	2435	5880	5358	4682	2926	2222	1529	884
MEAN	153	156	114	111	84.0	190	179	151	97.5	71.7	49.3	29.5
MAX	711	841	220	363	102	803	617	565	182	181	68	56
MIN	94	93	92	82	77	80	101	95	67	55	34	24
CFSM	1.72	1.75	1.28	1.25	.94	2.13	2.01	1.70	1.09	.81	.55	.33
IN.	1.98	1.96	1.47	1.43	1.02	2.45	2.24	1.95	1.22	.93	.64	.37

CAL YR 1979 TOTAL 70136 MEAN 192 MAX 4480 MIN 49 CFSM 2.16 IN 29.28
WTR YR 1980 TOTAL 42314 MEAN 116 MAX 841 MIN 24 CFSM 1.30 IN 17.67

01479000 WHITE CLAY CREEK NEAR NEWARK, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
NOV											
02...	1400	93	280	7.0	23.0	13.5	10.9	81	20	7.6	8.2

DATE	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)
NOV											
02...	17	.4	3.4	25	13	11	135	.18	33.9	2.3	.01

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS PO4)	PHOSPHORUS, TOTAL (MG/L AS PO4)
NOV										
02...	2.3	.02	.03	.39	.41	2.7	12	.020	.03	.06

DATE	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS P)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV										
02...	.01	3	7	0	89	7	40	0	450	.01

01479000 WHITE CLAY CREEK NEAR NEWARK, DE--Continued

BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1979 TO NOVEMBER 1979

DATE	NOV 2,79
TIME	1400
TOTAL COUNT	49
DIVERSITY: PHYLUM	0.2
.CLASS	0.2
..ORDER	0.6
...FAMILY	0.4
....GENUS	3.6
....GENUS-INSECTA	3.5

ORGANISM	COUNT
ANNELIDA	
.OLIGOCHAETA	
..PLESIOPORA	
...NAIDIDAE	
....UNKNOWN GENUS	2
ARTHROPODA (ARTHROPODS)	
.INSECTA	
..DIPTERA	
...CERATOPOGONIDAE=HELEIDAE	
....UNKNOWN GENUS	1
...CHIRONOMIDAE	
....BRILLIA	6
....CARDIOCLADIUS	1
....CONCHAPELOPIA,ARCTO,RHEO	1
....CRICOTOPUS	2
....MICROPSECTRA	6
....PARATANYTARSUS	2
....PHAENOPSECTRA	2
....POLYPEDILUM	4
....PSECTROCLADIUS	4
....RHEOTANYTARSUS	2
....TANYTARSUS	3
....THIENEMANNIELLA	10
..EPHEMEROPTERA	
...BAETIDAE	
....BAETIS	2
..PLECOPTERA	
...CAPNIIDAE	
....CAPNIA	1

01480000 RED CLAY CREEK AT WOODDALE, DE

LOCATION.--Lat 39°45'52", long 75°38'08", New Castle County, Hydrologic Unit 02040205, on right bank 12 ft (4 m) upstream from bridge on State Highway 48, 0.3 mi (0.5 km) south of Wooddale, 2.3 mi (3.7 km) north of Marshallton, and 4.9 mi (7.9 km) upstream from mouth.

DRAINAGE AREA.--47.0 mi² (121.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1943 to current year.

REVISED RECORDS.--WSP 1141: 1948. WSP 1272: 1951(m). WSP 1432: 1944(M), 1945, 1946(M), 1948, 1949(M). WSP 2102: 1960(M), 1964(M), 1966-67(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 81.46 ft (24.829 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 21, 1950, nonrecording gage at site 10 ft (3 m) downstream at same datum.

REMARKS.--Water-discharge records good. Some diurnal fluctuation at low flow caused by mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 65.4 ft³/s (1.852 m³/s), 18.90 in/yr (480 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,010 ft³/s (142 m³/s) July 21, 1975, gage height, 10.32 ft (3.146 m); minimum, 2.9 ft³/s (0.082 m³/s) Sept. 4, 1966; minimum daily, 4.5 ft³/s (0.13 m³/s) Sept. 4, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,410 ft³/s (39.9 m³/s) Nov. 26, gage height, 5.17 ft (1.576 m); no other peak above base of 1,200 ft³/s (34 m³/s); minimum discharge 4.9 ft³/s (0.14 m³/s) Aug. 29, gage height, 2.17 ft (0.661 m), result of regulation; minimum daily discharge, 12 ft³/s (0.34 m³/s) Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	237	50	69	54	45	39	223	268	72	45	77	22
2	119	50	69	54	46	42	113	110	56	38	39	17
3	97	203	62	54	47	42	92	93	53	40	27	16
4	68	82	64	52	51	43	130	83	56	43	26	15
5	71	64	63	54	53	54	95	75	46	37	24	17
6	78	59	64	51	52	51	80	71	45	38	23	17
7	57	58	79	51	53	47	77	70	47	33	22	15
8	52	55	64	53	53	58	75	91	73	36	21	14
9	54	55	59	52	53	67	139	73	48	31	20	16
10	342	115	59	50	51	53	141	69	56	55	19	12
11	135	87	59	129	49	73	92	67	50	38	28	14
12	97	147	59	204	50	50	80	82	45	33	43	13
13	97	78	91	76	48	64	79	124	43	30	25	13
14	70	75	81	71	48	234	86	77	42	29	22	13
15	63	65	63	70	49	117	124	63	46	28	23	16
16	58	64	62	62	64	89	84	61	78	45	25	14
17	56	61	61	59	55	78	74	57	49	70	21	15
18	55	59	55	70	47	111	71	98	45	35	21	34
19	53	58	57	137	46	71	70	74	45	31	24	19
20	52	58	57	73	47	63	67	70	41	30	25	16
21	51	59	56	65	50	354	65	83	40	28	21	16
22	50	58	58	66	64	158	63	68	38	34	20	15
23	49	58	61	79	64	93	62	59	37	60	22	15
24	106	58	61	61	59	81	60	57	38	36	20	14
25	58	57	128	58	55	172	62	57	36	32	19	19
26	53	461	74	57	52	91	61	52	37	24	19	21
27	51	159	63	55	48	78	75	49	37	27	18	15
28	60	97	59	56	48	72	161	49	38	23	21	14
29	58	81	58	55	44	188	199	47	61	27	14	14
30	52	73	57	51	---	119	141	47	97	25	18	15
31	50	---	55	49	---	330	---	55	---	25	21	---
TOTAL	2549	2704	2027	2128	1491	3182	2941	2399	1495	1106	768	486
MEAN	82.2	90.1	65.4	68.6	51.4	103	98.0	77.4	49.8	35.7	24.8	16.2
MAX	342	461	128	204	64	354	223	268	97	70	77	34
MIN	49	50	55	49	44	39	60	47	36	23	14	12
CFSM	1.75	1.92	1.39	1.46	1.09	2.19	2.09	1.65	1.06	.76	.53	.35
IN.	2.02	2.14	1.60	1.68	1.18	2.52	2.33	1.90	1.18	.88	.61	.38

CAL YR 1979 TOTAL 37384 MEAN 102 MAX 1810 MIN 24 CFSM 2.17 IN 29.59
WTR YR 1980 TOTAL 23276 MEAN 63.6 MAX 461 MIN 12 CFSM 1.35 IN 18.42

01480000 RED CLAY CREEK AT WOODDALE, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: April 1953 to current year.

INSTRUMENTATION.--Temperature recorder since April 1953.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 30.5°C July 17, Aug. 2, 6, 1955, July 19, 1963; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 29.0°C July 21; minimum, 1.5°C on many days during winter periods.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.0	18.0	10.5	9.0	5.5	5.0	4.0	3.0	2.0	2.0	1.5	1.5
2	18.5	18.0	13.5	10.5	5.0	4.5	3.5	2.5	2.0	2.0	1.5	1.5
3	19.0	18.5	13.5	12.0	4.5	4.0	4.0	3.5	2.0	2.0	1.5	1.5
4	18.5	17.5	12.0	10.0	4.5	4.0	4.0	3.0	2.0	1.5	2.0	1.5
5	18.0	17.0	10.0	8.5	5.0	4.5	3.0	2.5	2.0	1.5	4.5	2.0
6	17.0	15.5	9.0	8.0	6.5	5.0	2.5	1.5	2.0	1.5	6.5	4.5
7	15.5	14.5	10.0	8.5	7.5	6.5	2.5	1.5	2.0	1.5	6.0	5.0
8	14.5	13.0	10.0	9.0	7.5	6.5	3.0	2.5	2.0	1.5	9.0	6.0
9	14.0	13.5	11.0	9.0	6.5	5.5	3.0	2.5	2.0	2.0	10.0	8.5
10	13.5	10.0	13.0	11.0	5.5	5.0	2.5	1.5	2.5	2.0	8.5	6.5
11	10.0	9.5	13.0	12.0	6.0	5.0	5.5	2.0	2.5	2.0	8.5	7.5
12	11.5	10.0	12.0	11.0	7.5	6.0	6.0	4.0	3.0	2.5	7.0	4.5
13	12.0	11.5	11.5	11.0	8.0	7.5	4.0	3.0	3.0	2.0	5.0	3.0
14	11.5	10.0	11.0	10.0	7.5	6.0	5.5	3.0	3.5	2.0	3.5	3.0
15	10.5	9.5	10.0	8.5	6.0	4.5	7.0	5.5	4.0	3.5	5.5	3.5
16	11.0	9.5	9.0	8.5	5.5	4.5	7.0	6.0	4.5	4.0	6.5	5.0
17	12.5	11.0	8.5	7.0	5.5	3.0	6.0	5.0	4.0	3.0	8.0	6.0
18	13.5	12.0	8.0	7.0	3.0	2.0	6.0	5.5	3.0	2.0	10.5	8.0
19	13.5	13.0	8.5	7.5	2.0	2.0	6.0	6.0	3.0	2.0	9.5	7.5
20	15.0	14.0	10.0	8.5	2.5	2.0	6.0	5.0	4.5	2.5	9.0	7.5
21	16.0	14.5	10.0	9.0	2.5	2.0	5.0	3.5	6.5	4.0	10.5	9.0
22	16.5	15.5	10.5	9.5	4.5	2.5	4.0	3.0	6.5	6.0	10.0	6.5
23	17.0	16.0	11.0	10.0	5.5	4.5	5.0	4.0	7.0	6.0	8.5	5.5
24	17.0	13.5	12.0	11.0	7.0	5.5	4.5	2.5	7.5	6.5	8.0	7.0
25	13.5	11.5	14.0	12.0	9.5	7.0	2.5	2.0	7.0	6.5	7.5	7.5
26	12.0	10.5	15.5	14.0	9.0	7.5	3.0	2.5	6.5	4.5	8.0	6.5
27	10.5	10.0	14.5	11.5	7.5	5.5	2.5	2.0	4.5	3.5	9.5	7.0
28	10.0	9.5	11.5	10.5	5.5	4.5	3.5	2.5	3.5	3.0	9.5	8.0
29	10.0	9.0	10.5	7.5	5.0	4.5	3.5	3.0	3.0	2.0	9.0	8.5
30	10.0	9.0	7.5	5.5	5.0	4.5	3.5	2.0	---	---	11.0	9.0
31	10.0	9.0	---	---	5.0	4.0	2.0	2.0	---	---	11.0	7.5
MONTH	19.0	9.0	15.5	5.5	9.5	2.0	7.0	1.5	7.5	1.5	11.0	1.5

01480000 RED CLAY CREEK AT WOODDALE, DE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.5	6.5	13.0	11.0	21.0	18.5	23.5	21.5	25.5	23.5	27.0	24.5
2	11.5	9.0	14.5	12.5	22.0	20.5	25.0	22.0	25.5	23.5	27.5	24.5
3	12.0	9.0	17.5	14.0	22.5	21.5	24.5	24.0	27.0	24.0	26.0	24.5
4	11.5	10.5	18.0	15.0	22.0	20.0	26.0	24.0	26.0	24.5	24.5	22.5
5	11.5	10.0	18.5	14.5	20.5	18.5	25.5	24.0	28.0	24.5	24.5	23.0
6	12.0	9.0	19.5	16.5	20.0	18.0	25.0	23.5	27.0	25.0	25.5	23.0
7	12.5	10.0	19.5	17.0	21.0	18.0	23.0	21.0	27.0	24.5	24.5	23.0
8	14.0	11.5	19.0	14.5	22.0	20.0	22.0	21.0	27.0	24.5	22.5	20.5
9	13.5	13.0	14.5	12.5	20.0	17.5	23.5	20.5	27.5	25.5	22.0	20.0
10	14.5	12.5	15.0	11.5	18.0	17.0	24.0	22.5	26.5	25.0	23.0	21.5
11	15.0	12.5	14.5	13.5	17.5	16.0	25.0	23.0	26.0	24.5	21.5	19.0
12	14.5	12.0	15.5	14.0	18.0	16.0	26.0	24.0	25.5	24.5	21.5	18.5
13	15.5	13.5	18.0	15.5	19.5	17.0	25.0	22.5	25.0	23.0	22.0	19.0
14	15.0	12.5	18.5	17.5	20.5	18.5	25.5	22.0	25.0	22.5	22.5	21.0
15	13.0	12.0	17.5	15.0	21.5	20.0	25.5	22.5	24.5	23.5	23.0	21.5
16	12.5	9.5	16.5	14.0	21.5	19.5	26.5	23.5	24.0	22.0	21.0	19.0
17	11.0	8.0	16.0	14.5	20.0	17.5	25.0	23.5	23.5	20.0	21.0	19.0
18	13.0	8.5	16.0	15.5	19.5	17.5	26.0	24.0	21.5	21.0	21.5	21.0
19	14.5	10.5	16.5	15.0	19.5	17.5	26.0	24.0	21.5	20.5	21.0	19.0
20	15.5	11.5	16.5	16.0	20.0	18.5	27.5	24.5	24.0	21.5	19.5	18.0
21	17.0	14.0	16.5	15.5	21.5	18.5	29.0	26.0	23.0	22.0	22.0	19.0
22	15.5	12.5	18.0	15.0	21.5	19.5	28.5	26.0	22.5	21.5	23.5	21.0
23	15.5	12.0	20.0	17.0	22.5	20.0	27.0	24.5	23.5	21.0	23.5	22.0
24	16.0	13.0	20.0	19.0	23.5	20.5	25.0	23.0	24.5	21.5	22.0	20.0
25	17.0	15.0	20.5	18.5	24.0	22.0	26.0	22.0	24.5	21.5	20.0	19.5
26	16.5	13.0	20.0	17.5	23.0	22.0	26.0	22.5	25.0	22.0	20.5	18.5
27	13.0	11.5	18.5	16.0	24.5	22.5	26.5	24.0	25.5	22.5	18.5	15.5
28	11.5	11.5	18.0	15.5	24.5	23.0	26.0	23.5	25.5	23.0	16.5	14.5
29	11.5	11.0	19.0	17.5	24.5	23.5	26.0	24.5	25.5	23.5	17.0	15.5
30	11.0	11.0	20.0	18.5	24.0	23.0	26.5	24.5	26.0	24.0	18.0	16.5
31	---	---	20.0	19.5	---	---	26.5	24.0	26.5	24.0	---	---
MONTH	17.0	6.5	20.5	11.0	24.5	16.0	29.0	20.5	28.0	20.0	27.5	14.5

01480100 LITTLE MILL CREEK AT ELSMERE, DE

LOCATION.--Lat 39°44'05", long 75°35'14", New Castle County, Hydrologic Unit 02040205, on left bank at downstream side of bridge on North Du Pont Road at Elsmere, 0.5 mi (0.8 km) downstream from unnamed tributary, and 2.2 mi (3.5 km) upstream from mouth.

DRAINAGE AREA.--6.70 mi^2 (17.35 km^2).

PERIOD OF RECORD.--October 1963 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Concrete control since Nov. 5, 1968. Prior to Mar. 19, 1964, nonrecording gage at same site and datum. Datum of gage is 48.62 ft (14.819 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 10.1 ft^3/s (0.286 m^3/s), 20.47 in/yr (520 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft^3/s (112 m^3/s) Aug. 10, 1967, gage height, 8.58 ft (2.615 m), from rating curve extended above 380 ft^3/s (10.8 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 0.10 ft^3/s (0.003 m^3/s) July 17, 18, Sept. 18, 19, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft^3/s (9.9 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 26	1100	*639	18.1	4.64	1.414	June 29	1830	388	11.0	3.94	1.201

Minimum daily discharge, 0.45 ft^3/s (0.013 m^3/s) Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	3.6	5.0	3.7	3.2	2.8	36	40	4.0	3.2	13	.81
2	7.0	3.9	4.9	3.7	3.0	2.9	12	10	3.1	2.8	5.4	.72
3	6.8	42	4.5	3.6	3.0	3.3	9.5	7.8	4.2	3.4	8.0	.78
4	3.4	6.5	4.5	3.5	3.2	3.4	31	6.7	3.5	2.7	2.3	.63
5	9.5	4.6	4.3	4.1	3.1	6.1	11	5.8	2.8	2.6	1.6	2.8
6	4.3	4.5	8.3	4.0	3.1	3.8	8.3	5.4	2.6	2.1	2.5	.88
7	2.8	4.3	7.4	3.9	3.3	3.4	7.6	6.8	4.1	2.0	3.0	.61
8	2.5	4.1	4.3	3.8	3.2	7.3	7.0	11	21	2.2	1.2	.53
9	6.8	4.6	4.0	3.8	3.1	5.8	45	5.3	5.1	2.4	1.1	.45
10	77	9.4	4.0	3.3	3.1	8.2	28	4.7	8.8	13	1.0	.59
11	11	19	4.0	48	3.1	13	9.6	4.9	3.5	2.5	8.3	.47
12	12	20	3.9	32	3.1	4.1	7.9	11	2.9	2.0	7.9	.56
13	8.4	6.5	18	6.5	2.9	51	7.1	27	2.7	1.7	4.3	.53
14	6.0	6.2	6.8	6.1	2.9	55	15	5.9	2.6	1.9	1.6	.57
15	4.3	4.8	4.7	5.3	3.0	11	14	4.7	11	1.9	1.6	.99
16	5.3	4.9	5.0	4.6	9.3	6.6	7.3	4.3	18	5.0	1.4	1.2
17	3.7	4.3	5.8	4.4	2.9	9.5	6.3	4.1	3.4	11	1.2	.96
18	3.6	4.2	4.0	21	2.7	14	6.2	23	3.1	4.1	1.1	28
19	3.4	4.1	4.0	19	2.8	6.1	5.8	6.2	2.7	2.2	1.5	1.8
20	3.9	4.0	4.0	6.5	2.6	5.4	5.8	5.0	2.6	3.8	1.4	1.3
21	3.3	4.0	3.8	5.9	3.0	95	5.9	12	2.3	9.9	1.3	1.4
22	3.2	4.1	4.3	12	10	14	5.8	5.0	2.2	19	1.5	1.3
23	7.3	4.3	4.1	8.7	4.5	7.7	5.8	4.2	2.1	5.9	2.0	1.1
24	25	3.9	4.3	5.1	3.8	16	5.7	4.0	2.1	2.4	1.2	.92
25	4.9	5.5	24	4.7	3.5	43	5.7	3.8	2.2	1.7	.96	11
26	4.0	172	5.9	4.4	3.3	9.0	5.6	3.5	2.1	1.7	1.0	1.7
27	3.7	15	4.5	4.2	3.2	7.3	15	3.4	2.2	1.6	1.3	.86
28	5.9	7.9	4.1	4.0	3.4	6.7	29	3.3	18	1.5	1.3	.74
29	4.1	6.3	4.0	3.8	2.8	72	27	3.2	45	6.9	1.5	.98
30	3.4	5.5	3.9	3.4	---	15	51	3.2	17	1.9	1.3	1.2
31	3.5	---	3.8	3.3	---	111	---	3.7	---	1.5	.85	---
TOTAL	280.0	394.0	178.1	250.3	104.1	619.4	436.9	248.9	206.9	126.5	83.61	66.38
MEAN	9.03	13.1	5.75	8.07	3.59	20.0	14.6	8.03	6.90	4.08	2.70	2.21
MAX	77	172	24	48	10	111	51	40	45	19	13	28
MIN	2.5	3.6	3.8	3.3	2.6	2.8	5.6	3.2	2.1	1.5	.85	.45
CFSM	1.35	1.96	.86	1.20	.54	2.99	2.18	1.20	1.03	.61	.40	.33
IN.	1.55	2.19	.99	1.39	.58	3.44	2.43	1.38	1.15	.70	.46	.37

CAL YR 1979 TOTAL 4686.40 MEAN 12.8 MAX 257 MIN 1.2 CFSM 1.91 IN 26.02
WTR YR 1980 TOTAL 2995.09 MEAN 8.18 MAX 172 MIN .45 CFSM 1.22 IN 16.63

01481500 BRANDYWINE CREEK AT WILMINGTON, DE

LOCATION.--Lat 39°46'09", long 75°34'25", New Castle County, Hydrologic Unit 02040205, on right bank in Rockford Park, 0.2 mi (0.3 km) downstream from Henry Clay Bridge, in Wilmington, and 4.2 mi (6.8 km) upstream from mouth.

DRAINAGE AREA.--314 mi^2 (813 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to current year. Prior to December 1946 monthly discharge only, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1948, 1950.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 68.23 ft (20.797 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for August and September, which are fair. Some diurnal fluctuation at low flow caused by mills above station. Flow regulated since November 1973 by Marsh Creek Reservoir, capacity 22,190 acre-ft (27.4 hm^3), about 27 mi (43 km) upstream. No diversion just above station by plant of E. I. du Pont de Nemours & Co. since June 13, 1960.

AVERAGE DISCHARGE.--34 years, 486 ft^3/s (13.76 m^3/s), 21.02 in/yr (534 mm/yr), adjusted for storage since November 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft^3/s (821 m^3/s) June 23, 1972, gage height, 15.49 ft (4.721 m), from rating curve extended above 18,000 ft^3/s (510 m^3/s); minimum, about 30 ft^3/s (0.85 m^3/s) Dec. 26, 1948, during period of ice effect; minimum daily, 56 ft^3/s (1.59 m^3/s) Aug. 23, 24, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft^3/s (110 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 10	1530	4310	122	6.49	1.978	Mar. 21	2330	*5090	144	7.06	2.152
Nov. 26	1700	4730	134	6.80	2.073	Mar. 31	2045	4750	135	6.84	2.085

Minimum daily discharge, 91 ft^3/s (2.58 m^3/s) Sept. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	530	609	445	319	261	2790	2670	615	373	266	162
2	1290	526	586	436	343	296	1650	1330	521	315	224	128
3	1070	1730	553	422	338	327	1220	1130	491	300	192	117
4	810	995	582	410	338	319	1360	972	472	310	196	114
5	761	711	577	420	333	335	1170	829	427	290	176	112
6	1530	654	576	411	320	356	959	766	418	281	173	110
7	764	634	654	396	324	324	861	734	427	263	176	106
8	694	599	581	409	324	350	794	801	472	250	163	105
9	665	568	532	403	318	441	1130	717	463	263	155	104
10	2990	793	533	378	326	380	1260	653	472	281	150	102
11	1850	810	516	613	311	457	936	650	454	258	174	101
12	1220	1130	512	1870	315	370	801	823	410	245	215	99
13	1170	775	599	640	300	412	757	1420	394	233	185	98
14	919	727	696	511	301	1170	760	926	378	229	153	96
15	816	690	559	501	311	767	1030	691	370	221	148	93
16	765	677	529	454	357	696	808	624	567	229	152	91
17	737	630	543	427	369	706	707	581	442	719	144	91
18	716	619	473	445	306	1480	672	794	378	298	144	144
19	652	587	478	779	316	794	607	720	364	245	146	112
20	629	575	485	564	309	589	587	953	364	221	149	106
21	613	557	466	482	319	2030	567	868	358	229	142	104
22	595	545	490	463	367	2360	545	794	342	215	134	102
23	591	538	514	511	440	911	534	637	326	315	132	104
24	1010	523	532	463	391	794	532	577	320	276	131	97
25	684	513	1090	436	362	1250	525	566	315	221	132	97
26	616	2380	829	427	339	847	536	513	315	205	128	112
27	580	1620	564	418	318	714	607	464	305	291	125	128
28	624	800	504	402	311	655	1660	443	295	186	128	104
29	649	698	481	386	301	1130	1970	434	362	205	125	99
30	574	645	468	353	---	1030	1220	412	540	194	122	97
31	547	---	446	320	---	2410	---	457	---	190	131	---
TOTAL	28451	23779	17557	15595	9626	24961	29575	24839	12385	9261	4912	3235
MEAN	918	793	566	503	332	805	986	801	413	266	158	108
MAX	2990	2380	1090	1870	440	2410	2790	2670	615	719	266	162
MIN	547	513	446	320	300	261	525	412	295	186	122	91
(≠)	2.7	-0.7	-28.0	-6.5	9.7	31.7	1.3	-8.3	-2.5	-4.2	-2.8	-5.2
MEAN‡	921	792	538	497	322	837	987	793	411	262	155	103
CFSM‡	2.93	2.52	1.71	1.58	1.03	2.67	3.14	2.53	1.31	0.83	0.49	0.33
IN‡	3.38	2.81	2.18	1.82	1.17	3.07	3.51	2.91	1.46	0.96	0.57	0.36

CAL YR 1979 TOTAL 326962 MEAN 896 MAX 12100 MIN 246 MEAN‡ 896 CFSM‡ 2.85 IN‡ 38.71
WTR YR 1980 TOTAL 203176 MEAN 555 MAX 2990 MIN 91 MEAN‡ 554 CFSM‡ 1.76 IN‡ 24.02

≠ Change in contents in Marsh Creek Reservoir, equivalent in cubic feet per second, furnished by Pennsylvania Department of Environmental Resources.

‡ Adjusted for change in reservoir contents.

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1956 to September 1961, February 1971 to September 1973, October 1974 to September 1980 (discontinued).
SUSPENDED-SEDIMENT DISCHARGE: December 1946 to September 1961, July 1962 to September 1980 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: (water years 1957-61, 1972-73, 1976-78): Maximum daily, 30.5°C July 18, 19, 1977; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,700 mg/L Feb. 14, 1966; minimum daily mean, 1 mg/L on many days.
SEDIMENT LOADS: Maximum daily, 35,700 tons (32,400 tonnes), Feb. 14, 1971; minimum daily, less than 0.25 ton (0.23 tonne) Sept. 15, 16, 17, 1980.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 410 mg/L Mar. 22; minimum daily mean, 1 mg/L Sept. 15, 16, 17.
SEDIMENT LOADS: Maximum daily, 2,610 tons (2,370 tonnes) Mar. 22; minimum daily, 0.25 ton (0.23 tonne) Nov. 9, 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
DEC												
14...	1100	670	181	6.2	12.5	6.0	7	12.6	65	25	16	6.1
APR												
01...	1110	2510	138	6.7	17.0	6.5	20	12.3	49	18	12	4.6
JUN												
02...	1220	544	197	7.0	32.0	21.3	4	8.7	69	25	17	6.4
SEP												
08...	1115	110	297	7.0	22.0	22.9	5	--	100	37	25	9.7

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
DEC											
14...	8.8	31	.5	2.2	40	20	13	.1	10	114	100
APR											
01...	6.5	21	.4	2.4	31	16	9.3	.1	7.7	90	77
JUN											
02...	8.7	21	.5	2.0	44	19	12	.2	9.7	135	102
SEP											
08...	15	23	.6	3.7	65	26	19	.3	10	176	148

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
DEC											
14...	.16	206	2.4	.140	.43	330	270	60	50	0	50
APR											
01...	.12	610	1.5	.110	.34	3900	3900	40	170	140	30
JUN											
02...	.18	198	2.3	.100	.31	100	40	60	30	0	30
SEP											
08...	.24	52.3	1.5	.310	.95	440	410	30	90	50	40

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	10.5	5.0	---	---	---	---	14.0	---	24.0	26.5	31.0
2	18.0	13.5	---	3.5	---	---	12.0	17.0	24.0	27.0	27.5	32.0
3	19.0	13.0	5.0	4.0	---	---	12.0	17.5	22.0	25.5	29.0	28.0
4	19.0	11.0	6.0	1.5	---	---	12.5	---	21.5	26.0	27.0	---
5	18.0	---	7.0	---	---	---	12.0	21.0	21.5	26.0	30.0	31.0
6	16.0	---	7.0	2.0	---	6.0	---	21.0	22.5	---	29.5	---
7	---	---	8.0	2.0	---	7.5	13.5	20.5	19.5	---	30.0	25.0
8	---	10.5	6.0	2.5	---	---	15.0	---	---	23.0	29.5	23.5
9	14.0	---	---	2.5	---	9.0	14.0	15.5	20.0	25.0	29.5	24.0
10	9.5	---	6.0	1.5	---	10.5	16.0	16.5	18.0	25.5	30.0	---
11	10.0	---	7.5	4.5	---	7.0	15.5	16.0	18.0	26.5	29.0	22.5
12	11.5	---	9.0	---	---	5.5	15.5	17.0	19.0	26.0	28.5	22.5
13	12.0	10.0	7.0	---	---	---	---	20.0	20.0	25.5	27.0	23.5
14	18.0	10.0	6.5	6.0	---	3.5	13.0	19.0	21.0	27.0	26.0	---
15	11.5	9.0	---	7.0	3.0	4.0	10.5	19.0	---	27.0	26.5	---
16	---	8.5	6.0	7.0	3.0	---	10.5	---	20.5	28.0	24.5	21.5
17	---	8.5	2.5	5.5	---	8.0	11.0	19.0	21.5	27.0	---	22.0
18	15.0	7.5	1.0	5.5	2.0	8.0	14.5	17.0	20.0	27.5	23.0	23.0
19	15.0	10.0	.5	6.0	3.0	9.5	16.0	18.0	21.5	---	28.5	---
20	15.5	9.0	1.0	5.0	4.5	10.0	16.5	18.0	20.5	29.0	25.0	21.0
21	---	10.0	2.0	4.0	---	11.5	12.0	16.5	20.5	30.0	24.0	22.0
22	12.0	---	5.0	3.5	6.0	7.0	17.0	---	---	29.5	23.5	26.0
23	---	---	6.5	4.0	8.0	9.5	16.0	21.5	22.0	27.0	---	25.0
24	---	---	---	1.0	3.0	10.0	---	23.0	24.0	25.5	25.5	23.0
25	12.0	---	---	2.0	6.5	8.0	18.0	---	25.5	26.0	26.5	20.0
26	10.0	15.5	7.5	1.5	4.0	8.5	---	21.0	24.0	27.0	27.0	19.0
27	10.0	13.0	5.5	---	3.5	9.5	12.5	20.0	25.5	27.0	28.0	---
28	10.0	11.0	5.5	3.0	---	9.5	12.0	20.0	25.0	27.0	27.5	26.0
29	10.0	8.5	---	2.0	---	10.0	12.0	19.0	25.0	27.0	28.0	18.0
30	10.0	5.0	---	1.0	---	11.0	11.5	20.5	24.0	28.0	26.5	19.5
31	9.5	---	5.5	1.5	---	8.0	---	20.5	---	28.0	---	---

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	47	290	5	7.2	2	3.3	3	3.6	4	3.4	5	3.5
2	63	219	8	11	3	4.7	2	2.4	4	3.7	4	3.2
3	52	171	236	1420	3	4.5	2	2.3	4	3.7	4	3.5
4	24	52	28	75	4	6.3	2	2.2	4	3.7	5	4.3
5	27	55	12	23	3	4.7	2	2.3	3	2.7	5	4.5
6	120	496	9	16	3	4.7	2	2.2	3	2.6	5	4.8
7	22	45	7	12	5	8.8	3	3.2	3	2.6	6	5.2
8	12	22	6	9.7	4	6.3	4	4.4	3	2.6	6	5.7
9	11	20	5	7.7	3	4.3	4	4.4	3	2.6	6	7.1
10	180	1790	15	32	2	2.9	5	5.1	2	1.8	4	4.1
11	65	325	10	22	2	2.8	45	74	2	1.7	8	9.9
12	23	76	30	92	4	5.5	150	757	2	1.7	8	8.0
13	26	82	8	17	7	11	10	17	3	2.4	15	17
14	12	30	5	9.8	7	13	6	8.3	4	3.3	70	221
15	9	20	6	11	5	7.5	7	9.5	4	3.4	26	54
16	7	14	5	9.1	3	4.3	5	6.1	6	5.8	10	19
17	6	12	5	8.5	5	7.3	4	4.6	5	5.0	7	13
18	6	12	4	6.7	4	5.1	6	7.2	5	4.1	120	480
19	5	8.8	4	6.3	6	7.7	18	38	5	4.3	36	77
20	4	6.8	5	7.8	4	5.2	6	9.1	4	3.3	9	14
21	4	6.6	5	7.5	3	3.8	5	6.5	4	3.4	224	2320
22	4	6.4	5	7.4	4	5.3	5	6.3	6	5.9	410	2610
23	4	6.4	5	7.3	5	6.9	6	8.3	8	9.5	58	143
24	25	68	5	7.1	6	8.6	4	5.0	7	7.4	7	15
25	7	13	7	9.7	65	191	5	5.9	7	6.8	57	192
26	3	5.0	194	2180	36	81	8	9.2	7	6.4	14	32
27	3	4.7	90	394	9	14	6	6.8	5	4.3	8	15
28	4	6.7	9	19	4	5.4	6	6.5	5	4.2	6	11
29	4	7.0	6	11	3	3.9	4	4.2	5	4.1	28	85
30	5	7.7	3	5.2	3	3.8	4	3.8	---	---	21	58
31	5	7.4	---	---	3	3.6	4	3.5	---	---	234	2460
TOTAL	---	3885.5	---	4452.0	---	447.2	---	1028.9	---	116.4	---	8899.8
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	185	1390	232	1810	10	17	18	18	13	9.3	12	5.2
2	62	276	58	180	11	15	13	11	12	7.3	11	3.8
3	21	69	23	70	15	20	11	8.9	10	5.2	8	2.5
4	52	210	18	47	13	17	14	12	10	5.3	7	2.2
5	32	101	15	34	11	13	13	10	11	5.2	7	2.1
6	10	26	13	27	9	10	12	9.1	11	5.1	7	2.1
7	8	19	11	22	10	12	11	7.8	10	4.8	7	2.0
8	7	15	14	30	11	14	10	6.8	9	4.0	6	1.7
9	30	92	12	23	10	13	11	7.8	9	3.8	5	1.4
10	31	105	10	18	11	14	10	7.6	10	4.1	4	1.1
11	12	30	9	16	9	11	9	6.3	12	5.7	3	.82
12	10	22	23	51	7	7.7	13	8.6	14	8.1	4	1.1
13	9	18	98	389	8	8.5	14	8.8	11	5.5	3	.79
14	9	18	53	133	6	6.1	14	8.7	11	4.5	2	.52
15	30	83	19	35	9	9.2	13	7.8	10	4.0	1	.25
16	10	22	12	20	25	30	15	9.3	9	3.7	1	.25
17	7	13	9	14	20	24	75	146	10	3.9	1	.25
18	7	13	20	38	11	11	50	40	11	4.3	11	4.3
19	6	9.8	23	45	14	14	25	17	10	3.9	7	2.1
20	5	7.9	137	391	16	16	15	9.0	9	3.6	5	1.4
21	6	9.2	56	129	13	13	10	6.2	10	3.8	6	1.7
22	6	8.8	26	56	12	11	10	5.8	11	4.0	5	1.4
23	4	5.8	14	24	14	12	25	21	10	3.6	5	1.4
24	5	7.2	13	20	9	7.8	21	16	9	3.2	7	1.8
25	6	8.5	12	18	9	7.7	18	11	10	3.6	6	1.6
26	6	8.7	10	14	10	8.5	12	6.6	9	3.1	8	2.4
27	10	16	12	15	9	7.4	13	7.1	8	2.7	5	1.7
28	222	1130	11	13	8	6.4	11	5.5	7	2.4	3	.84
29	176	973	9	11	13	13	10	5.5	8	2.7	5	1.3
30	73	272	8	8.9	20	29	10	5.2	9	3.0	3	.79
31	---	---	15	19	---	---	10	5.1	10	3.5	---	---
TOTAL	---	4978.9	---	3720.9	---	486.3	---	455.5	---	136.9	---	50.81

TOTAL LOAD FOR YEAR: 28579.11 TONS.

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE

LOCATION.--Lat 39°41'21", long 75°31'19", New Castle County, Hydrologic Unit 02040205, at tidal-gaging station located on channel side of west tower of south bridge between Pigeon Point, Del., and Deepwater Point, N. J.

DRAINAGE AREA.--11,030 mi² (28,570 km²).

PERIOD OF RECORD.--July 1955 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: January 1968 to current year.
WATER TEMPERATURES: October 1956 to current year.
DISSOLVED OXYGEN: November 1962 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 12,700 micromhos Nov. 13, 1966; minimum, 100 micromhos on many days.
pH: Maximum, 9.3 Nov. 10-11, 13, 1970; minimum, 4.2 Nov. 6, 1969.
WATER TEMPERATURES: Maximum, 31.0°C Aug. 9, 1968; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 13.5 mg/L Dec. 29, 1969; minimum, 0.0 mg/L on many days during summer periods.

EXTREMES FOR CURRENT YEAR.--
pH: Maximum, 7.3 units Nov. 23, 27-30, Dec. 1, 4; minimum, 6.0 units June 5-10, 21.
WATER TEMPERATURES: Maximum, 29.0°C Aug.5-6; minimum, 0.5°C on many days during winter period.
DISSOLVED OXYGEN: Maximum, 11.6 mg/L Mar. 2; minimum, 1.2 mg/L Sept. 11.

NOTE: For 1980 water-year data on this station see U.S. Geological Survey Water-Data Report PA-80-1. Data for this station will also appear in U.S. Geological Survey Water-Data Report MD-DE-81-1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)
APR 28...	1130	284	6.7	13.5	21	66	43	16	6.4	19	2.4	28

DATE	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS P)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
APR 28...	0	23	8.9	.02	35	36	163	1.4	1.5	8.8	.53

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOT IN BOTTOM MATERIAL (MG/KG AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)
APR 28...	.64	.24	.77	8500	2.3	8510	.160	820	2	<10	50

DATE	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)
APR 28...	<10	20	36000	20	1200	.00	0	90	7.5	27	.7

DATE	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)
APR 28...	31	.0	27	15	35	3.0	1.2	.0	.0	.0	0

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6280	2080	4030	7230	2230	4250	8570	2530	4960	2210	330	972
2	6410	2040	4040	7400	2390	4410	8180	2510	4930	1790	310	935
3	7280	2260	4310	7260	2220	4350	8270	2520	4880	410	290	321
4	8090	2710	5080	7650	2630	4730	7970	2490	5110	310	270	297
5	8190	2830	5090	7610	2880	4930	6430	1960	4280	300	250	281
6	8460	2810	5330	7480	3040	5050	6170	1960	3920	300	260	275
7	7510	2740	4910	7510	3010	5050	5610	1830	3550	300	260	273
8	7340	2580	4650	7630	2890	5000	5970	1870	3700	280	240	259
9	8010	2260	4510	7280	3230	5230	5560	1510	3130	250	230	234
10	7150	2390	4380	7900	2940	4940	2690	490	1370	230	220	228
11	7640	2250	4460	7630	3120	5200	1920	450	986	230	220	228
12	8010	2860	5190	7670	3180	5230	1910	420	848	240	210	226
13	7580	2930	5140	8070	3340	5600	2610	400	906	240	210	226
14	8130	3040	5300	8370	3470	5670	1140	350	579	250	220	229
15	7230	2580	4940	7850	3120	5100	1390	350	683	240	230	231
16	8060	2990	5230	7840	3320	5220	1080	340	609	250	230	233
17	8000	3100	5380	8250	3760	5800	1150	320	559	270	230	238
18	7650	3130	5300	7670	2950	5500	630	320	422	270	240	247
19	7440	2940	5140	6700	3020	4620	600	330	444	370	250	278
20	7570	2900	4970	7090	3090	4670	1050	360	568	590	260	335
21	7380	3290	5220	7280	3170	4950	1080	330	601	1270	250	348
22	6670	3080	4790	7150	3320	5130	700	330	481	290	280	282
23	6880	2950	4740	8170	3460	5520	890	340	549	280	260	271
24	7550	2830	4700	7760	3640	5410	1040	340	621	330	250	275
25	6850	3440	5060	6790	3000	4640	1000	310	506	270	210	232
26	6330	3070	4610	6980	2710	4720	530	300	354	210	190	195
27	5740	2560	4160	8090	2890	5200	460	300	346	310	180	195
28	6050	2480	4230	8710	3110	5370	670	310	375	210	180	186
29	6640	2730	4350	7590	2450	4750	1250	310	548	190	180	186
30	6440	2700	4500	9010	2760	5200	1620	310	689	240	180	191
31	6930	2640	4580	---	---	---	2050	320	800	260	190	202
MONTH	8460	2040	4780	9010	2220	5050	8570	300	1690	2210	180	293

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	200	180	191	---	---	---	250	200	223	---	---	---
2	390	190	197	190	140	163	240	200	218	300	170	206
3	270	190	206	180	140	156	240	200	214	300	180	216
4	380	190	234	170	140	157	220	190	209	330	150	210
5	210	200	208	180	150	163	200	200	---	280	100	194
6	220	210	211	180	160	165	---	---	---	410	100	223
7	760	210	273	180	150	170	---	---	---	390	170	221
8	1640	220	520	180	170	176	---	---	---	450	170	234
9	1260	230	395	180	160	167	---	---	---	490	170	249
10	1490	230	443	170	140	157	---	---	---	480	110	250
11	1090	240	424	160	120	138	---	---	---	550	170	299
12	1820	250	785	130	110	122	---	---	---	880	110	369
13	1700	390	889	140	120	126	---	---	---	2200	110	449
14	1870	420	915	170	130	141	---	---	---	1330	170	408
15	2170	460	1120	150	120	131	---	---	---	1190	170	463
16	2460	440	1270	150	120	131	---	---	---	1550	170	500
17	1630	460	915	150	130	139	---	---	---	1190	170	519
18	1940	450	1070	160	140	146	250	180	204	1290	130	600
19	2480	390	1340	170	140	151	300	190	213	1470	110	592
20	4270	740	2310	170	150	163	420	180	241	1200	180	577
21	4110	720	2140	190	160	170	300	130	198	1310	170	608
22	3660	640	1940	210	160	179	---	---	---	1430	180	600
23	---	---	---	210	170	186	---	---	---	1800	190	690
24	---	---	---	290	180	215	---	---	---	1670	180	555
25	---	---	---	220	190	200	---	---	---	700	180	273
26	---	---	---	200	190	195	---	---	---	290	160	198
27	---	---	---	390	190	206	---	---	---	200	110	171
28	---	---	---	220	190	204	---	---	---	200	130	157
29	---	---	---	250	200	215	---	---	---	170	130	147
30	---	---	---	250	210	221	---	---	---	170	110	138
31	---	---	---	250	200	226	---	---	---	150	100	126
MONTH	4270	180	818	390	110	169	420	130	215	2200	100	348

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	140	100	117	1370	240	829	---	---	---	4100	1430	2590
2	130	100	112	1230	230	721	---	---	---	4350	1440	2690
3	140	100	110	1130	220	623	---	---	---	3900	1310	2570
4	120	100	105	1390	210	670	---	---	---	4580	1380	2610
5	120	100	104	1470	210	669	---	---	---	4540	1530	2820
6	120	100	105	1800	210	776	---	---	---	4810	1140	3220
7	240	100	123	2620	280	892	---	---	---	2750	610	1450
8	270	100	141	2800	360	1200	---	---	---	2460	490	1190
9	330	110	162	3310	420	1440	---	---	---	2120	550	1190
10	510	120	200	3470	450	1710	---	---	---	2060	540	1150
11	830	120	241	---	---	---	---	---	---	1760	480	1020
12	400	120	181	---	---	---	---	---	---	1950	490	1070
13	550	120	204	---	---	---	---	---	---	1830	540	1110
14	470	120	224	---	---	---	---	---	---	1930	590	1190
15	640	130	261	---	---	---	---	---	---	1460	440	876
16	570	140	270	---	---	---	---	---	---	1640	500	919
17	730	140	320	---	---	---	---	---	---	1640	510	984
18	750	150	339	---	---	---	---	---	---	1650	540	1040
19	820	150	356	---	---	---	---	---	---	1870	480	1020
20	1090	110	408	---	---	---	---	---	---	2010	630	1220
21	990	160	427	---	---	---	---	---	---	2090	710	1360
22	1110	180	514	---	---	---	---	---	---	2300	430	1110
23	1140	170	501	---	---	---	---	---	---	1120	410	709
24	1000	170	476	---	---	---	---	---	---	1320	480	742
25	960	170	507	---	---	---	---	---	---	1480	530	793
26	1460	200	632	---	---	---	---	---	---	1150	360	653
27	1370	210	656	---	---	---	4890	1780	3300	1000	370	574
28	1800	210	701	---	---	---	4430	1600	3020	1310	410	699
29	1440	250	765	---	---	---	4390	1890	3010	1120	360	646
30	1560	280	869	---	---	---	4050	1580	2810	1010	370	613
31	---	---	---	---	---	---	3870	1350	2610	---	---	---
MONTH	1800	100	338	3470	210	953	4890	1350	2950	4810	360	1330

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.1	6.7	6.9	7.1	6.6	6.8	7.3	6.8	7.0	7.1	6.6	6.8
2	7.0	6.6	6.8	7.2	6.7	6.9	7.2	6.8	7.0	7.0	6.5	6.8
3	7.0	6.7	6.8	7.2	6.6	6.9	7.2	6.8	7.0	6.7	6.4	6.5
4	7.0	6.7	6.8	7.2	6.7	6.9	7.3	6.8	7.0	6.6	6.4	6.5
5	6.9	6.6	6.8	7.2	6.7	6.9	7.1	6.7	7.0	6.6	6.5	6.5
6	6.9	6.6	6.8	7.1	6.7	6.9	7.1	6.7	6.9	6.7	6.5	6.6
7	6.8	6.6	6.7	7.1	6.7	6.9	7.1	6.7	6.9	6.6	6.5	6.6
8	6.8	6.6	6.7	7.1	6.7	6.9	7.1	6.7	6.9	6.7	6.5	6.6
9	6.8	6.6	6.7	7.1	6.7	7.0	7.0	6.6	6.8	6.6	6.4	6.5
10	7.1	6.6	6.8	7.1	6.7	6.9	6.8	6.4	6.6	6.5	6.3	6.4
11	7.1	6.6	6.8	7.1	6.7	6.9	6.8	6.4	6.6	6.4	6.4	6.4
12	7.1	6.7	6.9	7.1	6.7	6.9	6.7	6.4	6.5	6.4	6.4	6.4
13	7.1	6.7	6.9	7.1	6.8	7.0	6.8	6.4	6.6	6.5	6.4	6.5
14	7.1	6.7	6.9	7.2	6.8	7.0	6.6	6.5	6.5	6.5	6.4	6.5
15	7.1	6.6	6.9	7.1	6.7	6.9	6.8	6.5	6.6	6.5	6.4	6.5
16	7.1	6.7	6.9	7.1	6.8	7.0	6.7	6.5	6.6	6.5	6.4	6.5
17	7.1	6.7	6.9	7.2	6.9	7.0	6.8	6.5	6.6	6.6	6.4	6.5
18	7.1	6.7	6.9	7.2	6.8	7.0	6.9	6.6	6.7	6.5	6.4	6.5
19	7.1	6.7	6.9	7.1	6.8	7.0	6.8	6.6	6.7	6.7	6.4	6.5
20	7.1	6.6	6.9	7.2	6.8	7.0	7.0	6.7	6.8	6.7	6.5	6.6
21	7.1	6.7	6.9	7.2	6.8	7.0	7.0	6.6	6.8	6.9	6.4	6.6
22	7.0	6.6	6.8	7.2	6.9	7.0	6.9	6.6	6.8	6.5	6.3	6.4
23	7.0	6.6	6.8	7.3	6.9	7.1	6.9	6.7	6.8	6.6	6.4	6.5
24	7.1	6.6	6.9	7.2	6.9	7.1	7.0	6.6	6.8	6.6	6.5	6.5
25	7.1	6.7	6.9	7.2	6.8	7.0	6.9	6.6	6.8	6.6	6.5	6.6
26	7.0	6.7	6.9	7.2	6.8	7.0	6.8	6.5	6.7	6.7	6.5	6.6
27	7.0	6.6	6.8	7.3	6.9	7.1	6.8	6.5	6.6	6.6	6.5	6.6
28	7.0	6.6	6.8	7.3	6.9	7.1	6.9	6.5	6.7	6.6	6.5	6.5
29	7.0	6.6	6.8	7.3	6.8	7.0	7.0	6.5	6.7	6.6	6.5	6.5
30	7.1	6.6	6.9	7.3	6.8	7.0	7.1	6.5	6.8	6.6	6.4	6.5
31	7.1	6.6	6.9	---	---	---	7.0	6.5	6.8	6.6	6.5	6.5
MONTH	7.1	6.6	6.8	7.3	6.6	7.0	7.3	6.4	6.8	7.1	6.3	6.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.5	6.4	6.5	---	---	---	6.5	6.4	6.5	---	---	---
2	6.6	6.5	6.5	6.5	6.3	6.4	6.5	6.4	6.5	6.4	6.2	6.3
3	6.7	6.5	6.6	6.3	6.2	6.3	6.5	6.4	6.5	6.5	6.3	6.3
4	6.7	6.5	6.6	6.3	6.2	6.3	6.5	6.4	6.4	6.4	6.3	6.4
5	6.6	6.5	6.5	6.3	6.2	6.3	6.5	6.5	---	6.4	6.3	6.3
6	6.6	6.5	6.6	6.4	6.2	6.3	---	---	---	6.5	6.3	6.4
7	6.8	6.5	6.6	6.4	6.3	6.3	---	---	---	6.6	6.3	6.5
8	6.9	6.5	6.7	6.5	6.3	6.4	---	---	---	6.7	6.4	6.5
9	6.8	6.5	6.6	6.5	6.4	6.5	---	---	---	6.7	6.4	6.6
10	6.9	6.5	6.6	6.5	6.4	6.5	---	---	---	6.7	6.5	6.6
11	6.8	6.5	6.6	6.5	6.2	6.3	---	---	---	6.7	6.4	6.6
12	6.9	6.5	6.7	6.3	6.2	6.3	---	---	---	6.7	6.3	6.5
13	6.8	6.5	6.7	6.4	6.2	6.3	---	---	---	6.6	6.3	6.4
14	6.9	6.5	6.7	6.4	6.3	6.4	---	---	---	6.5	6.2	6.3
15	6.9	6.5	6.7	6.4	6.3	6.4	---	---	---	6.4	6.1	6.3
16	6.9	6.4	6.7	6.4	6.4	6.4	---	---	---	6.6	6.1	6.4
17	6.8	6.4	6.6	6.5	6.4	6.4	---	---	---	6.7	6.3	6.5
18	6.8	6.4	6.6	6.5	6.4	6.4	6.5	6.4	6.5	6.7	6.3	6.5
19	6.9	6.5	6.7	6.5	6.4	6.4	6.6	6.4	6.5	6.7	6.3	6.5
20	7.0	6.6	6.8	6.5	6.4	6.4	6.6	6.4	6.5	6.7	6.4	6.5
21	7.0	6.5	6.8	6.5	6.4	6.5	6.5	6.4	6.5	6.6	6.3	6.5
22	7.0	6.5	6.8	6.5	6.4	6.5	---	---	---	6.6	6.3	6.4
23	---	---	---	6.5	6.4	6.5	---	---	---	6.6	6.2	6.4
24	---	---	---	6.7	6.4	6.6	---	---	---	6.6	6.2	6.4
25	---	---	---	6.6	6.4	6.5	---	---	---	6.4	6.3	6.3
26	---	---	---	6.5	6.4	6.4	---	---	---	6.3	6.2	6.3
27	---	---	---	6.5	6.3	6.4	---	---	---	6.4	6.3	6.3
28	---	---	---	6.5	6.3	6.4	---	---	---	6.4	6.3	6.4
29	---	---	---	6.8	6.4	6.5	---	---	---	6.4	6.3	6.4
30	---	---	---	6.6	6.4	6.5	---	---	---	6.4	6.3	6.4
31	---	---	---	6.5	6.4	6.5	---	---	---	6.4	6.3	6.3
MONTH	7.0	6.4	6.7	6.8	6.2	6.4	6.6	6.4	6.5	6.7	6.1	6.4

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.4	6.2	6.3	6.6	6.2	6.5	6.7	6.5	6.6	7.0	6.7	6.8
2	6.3	6.2	6.3	6.6	6.2	6.4	6.7	6.5	6.6	7.0	6.7	6.8
3	6.3	6.1	6.2	6.7	6.2	6.4	6.8	6.5	6.6	7.0	6.7	6.8
4	6.2	6.1	6.2	6.7	6.2	6.4	6.8	6.4	6.6	7.0	6.7	6.8
5	6.2	6.0	6.1	6.7	6.2	6.4	6.9	6.4	6.6	7.1	6.6	6.8
6	6.1	6.0	6.1	6.7	6.2	6.5	6.8	6.4	6.6	7.1	6.6	6.9
7	6.2	6.0	6.1	6.8	6.2	6.5	6.8	6.5	6.7	6.9	6.4	6.7
8	6.2	6.0	6.1	6.8	6.2	6.5	6.9	6.5	6.7	6.8	6.3	6.5
9	6.3	6.0	6.1	6.8	6.3	6.5	6.9	6.5	6.7	6.8	6.3	6.5
10	6.3	6.0	6.1	6.9	6.3	6.6	6.9	6.5	6.7	6.7	6.3	6.5
11	6.4	6.1	6.2	6.9	6.3	6.6	6.9	6.6	6.8	6.6	6.2	6.5
12	6.3	6.1	6.2	6.9	6.4	6.6	7.0	6.7	6.9	6.7	6.2	6.5
13	6.4	6.1	6.2	6.8	6.4	6.6	7.1	6.7	6.9	6.7	6.3	6.5
14	6.4	6.1	6.2	6.8	6.4	6.6	7.1	6.6	6.9	6.8	6.3	6.6
15	6.4	6.2	6.3	6.8	6.4	6.6	7.0	6.5	6.8	6.7	6.3	6.5
16	6.5	6.2	6.3	6.8	6.4	6.6	7.1	6.6	6.9	6.7	6.3	6.5
17	6.6	6.2	6.3	6.7	6.3	6.6	7.1	6.7	6.9	6.6	6.4	6.5
18	6.6	6.2	6.4	6.7	6.3	6.5	7.1	6.7	6.9	6.6	6.4	6.5
19	6.7	6.2	6.4	6.7	6.3	6.5	7.1	6.7	6.9	6.7	6.4	6.5
20	6.6	6.1	6.3	6.7	6.3	6.5	7.0	6.6	6.9	6.9	6.4	6.6
21	6.5	6.0	6.2	6.6	6.4	6.5	7.0	6.7	6.9	6.9	6.6	6.8
22	6.5	6.1	6.3	6.6	6.3	6.5	7.0	6.7	6.9	6.9	6.4	6.7
23	6.5	6.1	6.3	6.7	6.3	6.5	7.0	6.7	6.9	6.8	6.4	6.6
24	6.5	6.1	6.3	6.6	6.3	6.5	7.1	6.7	6.9	6.8	6.4	6.6
25	6.5	6.1	6.3	6.7	6.4	6.5	7.1	6.7	6.9	6.7	6.3	6.5
26	6.6	6.2	6.4	6.7	6.4	6.6	7.0	6.7	6.9	6.7	6.3	6.5
27	6.6	6.2	6.4	6.7	6.4	6.6	7.0	6.7	6.9	6.6	6.2	6.4
28	6.5	6.1	6.4	6.7	6.5	6.6	7.0	6.6	6.8	6.7	6.2	6.5
29	6.6	6.2	6.4	6.7	6.5	6.6	7.1	6.7	6.9	6.6	6.2	6.5
30	6.7	6.2	6.5	6.8	6.5	6.6	7.0	6.7	6.9	6.6	6.2	6.4
31	---	---	---	6.7	6.5	6.6	7.0	6.6	6.8	---	---	---
MONTH	6.7	6.0	6.3	6.9	6.2	6.5	7.1	6.4	6.8	7.1	6.2	6.6

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.0	21.0	21.5	16.0	15.0	15.5	10.0	9.0	9.5	4.5	4.0	4.0
2	22.0	21.0	21.5	16.0	15.0	15.5	9.5	9.0	9.5	5.0	4.5	4.5
3	21.5	21.0	21.0	16.0	15.0	15.5	9.5	8.5	9.0	5.0	4.0	4.5
4	21.0	20.5	21.0	15.5	15.0	15.5	10.0	9.0	9.5	4.0	3.5	4.0
5	21.0	20.5	20.5	15.5	15.0	15.0	10.0	9.5	9.5	4.0	3.5	4.0
6	21.0	20.5	20.5	15.5	15.0	15.5	10.0	9.0	9.5	4.0	3.5	4.0
7	21.0	20.0	20.5	15.5	15.0	15.5	10.0	9.5	9.5	4.0	3.5	3.5
8	20.5	19.0	19.5	15.5	14.5	15.0	10.0	9.5	10.0	4.0	3.5	4.0
9	19.5	18.5	19.0	15.5	14.5	15.0	10.5	10.0	10.0	4.0	2.5	3.0
10	19.5	18.5	19.0	15.5	14.5	15.0	10.0	9.0	9.5	3.0	2.0	2.5
11	19.5	18.5	19.0	15.5	14.5	15.0	9.0	8.5	9.0	2.5	1.5	2.0
12	19.5	18.5	19.0	15.0	14.5	15.0	8.5	8.5	8.5	2.0	1.5	1.5
13	19.5	19.0	19.0	15.0	14.0	14.5	8.5	8.0	8.0	1.5	1.5	1.5
14	19.5	18.5	19.0	15.0	14.0	14.5	8.0	7.5	8.0	2.0	1.5	1.5
15	19.0	18.0	18.5	15.0	14.5	14.5	7.5	7.0	7.0	2.0	1.5	1.5
16	18.5	18.0	18.0	14.5	14.0	14.5	7.5	7.0	7.0	2.0	1.0	1.5
17	18.0	17.0	17.5	14.5	13.5	14.0	7.0	6.5	7.0	2.0	1.0	1.5
18	17.5	17.0	17.0	14.5	14.0	14.5	6.5	6.0	6.5	2.0	1.0	1.5
19	17.5	16.5	17.0	14.5	14.0	14.0	6.5	5.5	6.0	1.5	.5	1.0
20	17.5	16.5	17.0	14.0	13.5	13.5	6.0	4.5	5.5	1.0	.5	1.0
21	17.0	16.5	16.5	13.5	13.0	13.0	6.0	5.0	5.5	1.5	1.0	1.0
22	17.0	16.5	17.0	13.0	12.0	12.5	6.0	5.5	5.5	2.0	1.5	1.5
23	17.5	16.5	17.0	12.5	12.0	12.0	6.0	5.0	5.5	2.0	1.5	2.0
24	17.0	16.0	16.5	12.5	12.0	12.0	6.0	5.0	5.5	3.0	2.0	2.0
25	16.5	15.5	16.0	12.5	11.5	12.0	5.5	5.5	5.5	3.5	2.5	3.0
26	17.0	16.0	16.5	12.0	10.5	11.0	5.5	5.0	5.0	3.0	3.0	3.0
27	17.0	16.0	16.5	11.0	9.5	10.0	5.5	4.5	5.0	3.5	3.0	3.0
28	17.0	16.0	16.5	10.5	9.5	10.0	4.5	4.0	4.5	3.5	3.0	3.0
29	16.5	15.5	16.0	10.0	9.5	9.5	4.5	3.5	4.0	3.5	3.0	3.0
30	16.0	15.0	15.5	10.0	9.0	9.5	4.0	3.5	4.0	3.5	3.0	3.0
31	16.0	15.0	15.5	---	---	---	4.0	3.5	4.0	3.5	2.5	3.0
MONTH	22.0	15.0	18.0	16.0	9.0	13.5	10.5	3.5	7.0	5.0	.5	2.5

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.0	2.5	2.5	---	---	---	11.5	11.0	11.0	---	---	---
2	2.5	2.0	2.5	4.0	3.0	3.5	11.5	11.0	11.0	16.0	15.5	15.5
3	2.5	1.5	2.0	4.0	3.0	3.5	12.0	11.0	11.5	16.5	15.5	16.0
4	2.5	1.5	2.0	4.5	3.0	4.0	12.0	11.0	11.5	17.0	16.0	16.5
5	2.5	1.5	2.0	5.0	4.0	4.5	11.5	11.5	---	17.0	16.0	16.5
6	2.5	1.5	1.5	6.0	4.5	5.0	---	---	---	17.5	16.5	17.0
7	2.0	.5	1.0	7.0	5.0	6.0	---	---	---	18.0	17.0	17.5
8	2.0	.5	1.0	7.5	6.0	7.0	---	---	---	19.0	17.5	18.0
9	1.5	.5	1.0	7.5	6.5	7.0	---	---	---	19.5	18.0	18.5
10	1.5	.5	1.0	7.5	6.5	7.0	---	---	---	20.0	19.0	19.5
11	2.0	.5	1.0	7.5	6.0	6.5	---	---	---	20.5	19.5	20.0
12	1.0	.5	.5	6.0	5.5	6.0	---	---	---	20.5	20.0	20.0
13	1.0	.5	1.0	6.5	5.5	6.0	---	---	---	21.0	20.0	20.5
14	1.0	1.0	1.0	7.0	6.0	6.5	---	---	---	20.5	20.0	20.5
15	1.0	1.0	1.0	6.5	6.0	6.5	---	---	---	21.0	20.0	20.5
16	1.0	.5	1.0	6.5	5.5	6.0	---	---	---	21.0	20.5	21.0
17	1.0	.5	.5	7.0	6.0	6.5	---	---	---	21.0	20.0	20.5
18	1.0	.5	.5	7.5	6.5	7.0	11.0	10.5	10.5	21.0	20.0	20.5
19	1.0	.5	1.0	7.5	6.5	7.0	11.0	10.5	10.5	20.5	20.0	20.0
20	1.5	1.0	1.0	8.0	7.0	7.5	11.5	10.5	11.0	20.5	20.0	20.0
21	1.5	1.0	1.0	8.0	7.5	8.0	12.0	11.0	11.5	20.5	20.0	20.0
22	1.5	1.0	1.5	9.0	8.0	8.5	---	---	---	21.0	20.0	20.5
23	---	---	---	9.5	8.0	8.5	---	---	---	21.0	20.0	20.5
24	---	---	---	10.0	9.0	9.5	---	---	---	21.0	20.5	21.0
25	---	---	---	10.0	9.5	9.5	---	---	---	21.5	20.5	21.0
26	---	---	---	9.5	9.0	9.5	---	---	---	21.0	20.5	21.0
27	---	---	---	9.5	9.0	9.0	---	---	---	20.5	20.0	20.5
28	---	---	---	9.5	9.0	9.0	---	---	---	20.5	20.0	20.0
29	---	---	---	10.5	9.0	9.5	---	---	---	20.5	19.5	20.0
30	---	---	---	11.0	9.5	10.0	---	---	---	21.0	19.5	20.0
31	---	---	---	11.5	10.0	10.5	---	---	---	20.5	19.0	20.0
MONTH	3.0	.5	1.5	11.5	3.0	7.0	12.0	10.5	11.0	21.5	15.5	19.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.5	19.0	20.0	25.0	24.0	24.5	28.0	27.0	27.5	26.5	26.0	26.5
2	20.5	19.0	20.0	24.5	24.0	24.5	28.5	27.5	28.0	26.5	26.0	26.5
3	20.0	19.0	19.5	25.0	24.0	24.5	28.5	28.0	28.0	27.0	26.5	26.5
4	20.0	18.5	19.5	24.5	23.5	24.0	28.5	28.0	28.5	27.0	26.5	26.5
5	20.0	18.5	19.5	24.0	23.0	23.5	29.0	28.0	28.5	27.0	26.5	27.0
6	20.0	19.0	19.5	23.5	23.0	23.5	29.0	28.5	28.5	26.5	26.0	26.5
7	21.0	19.5	20.0	24.0	23.0	23.5	28.5	28.0	28.0	26.5	25.5	26.0
8	21.5	20.5	21.0	24.0	23.5	23.5	28.5	27.5	28.0	26.0	25.5	25.5
9	21.5	21.0	21.5	24.5	20.0	23.5	28.5	28.0	28.0	25.5	25.0	25.0
10	22.5	21.5	22.0	21.0	20.0	20.5	28.5	27.5	28.0	25.0	24.5	24.5
11	22.5	21.5	22.0	25.0	20.0	22.0	28.0	27.0	27.5	24.5	24.0	24.5
12	22.0	21.0	21.5	25.5	24.5	25.0	27.5	26.0	26.5	24.0	23.5	24.0
13	22.0	21.0	21.5	26.0	24.5	25.0	26.0	25.0	25.5	24.0	23.5	23.5
14	22.5	21.0	22.0	26.0	25.5	25.5	25.5	25.0	25.0	24.0	23.5	24.0
15	22.5	22.0	22.0	26.5	25.5	26.0	25.5	24.0	24.5	24.0	23.0	23.5
16	23.0	22.0	22.5	27.0	26.0	26.5	24.5	23.5	24.0	24.0	23.5	23.5
17	23.0	22.5	23.0	27.5	26.5	27.0	24.0	23.0	23.5	24.5	23.5	24.0
18	23.5	23.0	23.0	27.5	27.0	27.0	23.5	22.5	23.0	24.0	23.5	24.0
19	23.5	23.0	23.0	27.5	27.0	27.0	23.5	23.0	23.0	23.5	22.5	23.5
20	24.0	23.0	23.5	28.0	27.0	27.5	24.0	23.0	23.5	23.0	22.0	22.5
21	24.0	23.5	23.5	27.5	26.5	27.0	24.0	23.0	23.5	23.5	22.0	22.5
22	24.0	23.0	23.5	27.0	26.0	26.5	24.0	23.0	23.5	22.5	21.5	22.0
23	24.0	23.5	24.0	27.0	26.0	26.5	24.0	23.0	23.5	21.5	21.0	21.0
24	24.0	23.5	23.5	27.0	26.0	26.5	24.5	23.5	24.0	21.0	20.5	20.5
25	23.5	23.0	23.5	27.5	26.5	27.0	25.0	24.0	24.5	21.0	20.0	20.5
26	23.5	23.0	23.5	27.5	27.0	27.0	25.5	24.5	25.0	20.5	20.0	20.0
27	24.0	23.0	23.5	27.5	27.0	27.0	25.5	24.5	25.0	20.5	20.0	20.0
28	24.0	23.5	23.5	27.5	26.5	27.0	26.0	25.0	25.5	20.5	20.0	20.0
29	24.5	23.5	24.0	27.5	27.0	27.0	26.0	25.5	25.5	21.0	20.5	21.0
30	24.5	24.0	24.0	27.5	26.5	27.0	26.5	25.5	26.0	21.0	20.0	20.5
31	---	---	---	27.5	27.0	27.0	27.0	26.0	26.0	---	---	---
MONTH	24.5	18.5	22.0	28.0	20.0	25.5	29.0	22.5	26.0	27.0	20.0	23.5

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.2	4.2	5.3	7.7	4.2	6.1	9.1	6.5	9.0	10.5	8.9	9.8
2	6.0	4.1	5.2	8.2	5.2	6.8	9.1	6.5	7.9	10.3	8.3	9.3
3	6.2	4.3	5.4	8.0	4.7	6.6	9.2	6.7	8.0	9.0	8.4	8.7
4	6.2	4.5	5.5	8.2	5.2	6.8	9.2	6.8	8.2	9.2	8.7	8.9
5	6.1	4.2	5.2	8.1	5.2	6.8	8.8	6.4	7.9	9.4	8.9	9.1
6	6.1	4.0	5.2	7.8	5.0	6.6	8.6	6.4	7.6	9.6	9.0	9.2
7	5.9	3.9	5.1	7.7	4.7	6.4	8.3	6.0	7.3	9.6	9.1	9.3
8	6.3	3.9	5.2	7.9	4.6	6.5	8.3	5.8	7.1	9.6	9.2	9.4
9	6.5	4.1	5.4	7.8	5.3	6.7	8.0	5.1	6.8	10.2	9.5	9.8
10	6.4	4.5	5.4	7.8	4.9	6.4	7.4	4.3	6.0	10.5	9.8	10.1
11	6.6	4.3	5.4	7.7	4.9	6.4	7.2	4.8	6.0	10.6	10.0	10.4
12	6.6	4.6	5.7	7.8	4.8	6.5	6.9	5.1	5.8	10.6	10.2	10.4
13	6.3	4.5	5.5	8.0	5.5	7.0	7.6	5.3	6.2	10.7	10.4	10.5
14	6.4	4.4	5.5	8.1	5.7	7.1	7.2	6.1	6.6	10.7	10.3	10.5
15	6.4	3.9	5.4	7.9	5.4	6.8	8.3	6.8	7.4	10.7	10.2	10.4
16	6.6	4.4	5.7	8.2	5.7	7.1	8.1	7.2	7.5	10.5	9.6	10.2
17	6.9	4.6	6.0	8.8	6.8	7.8	8.5	7.4	8.0	10.3	9.7	10.0
18	6.7	4.7	5.9	8.6	6.5	7.9	9.9	8.3	8.8	10.3	9.6	10.0
19	6.7	4.7	5.9	8.5	6.6	7.6	9.8	8.4	9.1	10.8	9.8	10.2
20	6.8	4.6	5.8	8.8	6.8	7.8	10.5	8.7	9.5	10.5	9.5	10.1
21	6.7	4.9	5.9	9.0	7.0	8.1	10.4	8.6	9.6	10.2	9.2	9.8
22	6.5	4.7	5.7	9.1	7.2	8.4	10.0	8.7	9.3	10.4	9.1	9.8
23	6.5	4.6	5.6	9.5	7.6	8.7	10.1	8.8	9.4	10.3	9.9	10.2
24	7.1	4.5	5.9	9.3	7.7	8.7	10.2	8.6	9.4	10.3	9.9	10.1
25	7.0	5.2	6.3	9.3	7.4	8.5	10.1	9.2	9.6	10.4	10.1	10.2
26	6.7	5.3	6.1	9.8	7.3	8.8	9.9	9.0	9.5	10.3	10.0	10.2
27	6.6	4.7	5.8	10.1	7.9	9.3	10.0	8.9	9.5	10.2	9.7	10.0
28	6.7	4.7	5.8	9.8	7.6	8.8	10.5	9.0	9.7	9.9	9.4	9.7
29	6.8	4.6	5.8	9.1	6.7	8.1	11.1	9.3	10.1	9.9	9.5	9.7
30	6.9	4.7	6.1	9.3	6.9	8.2	11.0	9.2	10.1	9.8	9.6	9.7
31	6.9	4.9	6.1	---	---	---	10.7	9.1	9.9	9.8	9.5	9.7
MONTH	7.1	3.9	5.6	10.1	4.2	7.4	11.1	4.3	8.3	10.8	8.3	9.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.6	9.4	9.5	---	---	---	7.6	6.2	6.8	---	---	---
2	10.0	9.5	9.7	11.6	11.3	11.4	7.8	6.3	7.1	6.0	4.0	5.2
3	9.9	9.3	9.7	11.4	11.0	11.2	7.7	6.1	6.9	6.3	4.1	5.3
4	9.8	9.1	9.4	11.1	10.8	10.9	7.7	6.2	7.0	6.1	4.1	5.2
5	9.6	8.8	9.3	10.9	10.5	10.8	6.9	6.8	---	6.4	4.2	5.3
6	9.5	8.8	9.2	10.7	9.2	10.4	---	---	---	6.9	4.7	5.8
7	9.6	8.9	9.3	10.3	9.9	10.1	---	---	---	7.2	4.8	6.2
8	9.4	8.4	9.0	10.4	9.9	10.0	---	---	---	7.7	4.9	6.7
9	9.1	7.9	8.6	10.7	10.0	10.3	---	---	---	8.0	5.4	7.2
10	8.9	7.8	8.4	10.5	10.1	10.3	---	---	---	8.1	5.9	7.4
11	---	---	---	10.6	10.2	10.3	---	---	---	7.8	6.0	7.4
12	---	---	---	10.7	10.4	10.6	---	---	---	7.6	6.2	7.0
13	10.6	9.8	10.2	10.7	10.4	10.5	---	---	---	6.9	5.7	6.4
14	10.7	9.7	10.3	10.8	10.1	10.4	---	---	---	6.3	4.8	5.7
15	10.6	9.5	10.1	10.4	10.1	10.2	---	---	---	5.9	4.3	5.2
16	10.4	8.6	9.7	10.6	9.9	10.3	---	---	---	5.7	4.1	5.0
17	11.0	8.6	9.2	10.4	9.8	10.1	---	---	---	6.1	4.4	5.3
18	9.9	8.7	9.4	10.3	9.6	10.0	8.0	7.3	7.6	6.2	4.5	5.5
19	10.0	8.9	9.5	10.3	9.4	9.9	8.1	7.4	7.7	6.4	5.0	5.8
20	10.0	8.7	9.4	10.1	9.3	9.7	8.3	7.4	7.9	6.1	5.1	5.7
21	9.4	8.1	8.8	10.0	9.1	9.6	8.1	7.3	7.7	5.6	4.5	5.2
22	9.2	7.8	8.5	9.8	8.8	9.3	---	---	---	5.4	4.2	4.8
23	---	---	---	9.5	8.5	9.0	---	---	---	5.4	3.9	4.6
24	---	---	---	9.9	8.6	9.3	---	---	---	5.3	3.6	4.3
25	---	---	---	9.5	8.1	8.9	---	---	---	4.6	3.4	4.1
26	---	---	---	9.1	7.8	8.4	---	---	---	4.4	3.3	4.0
27	---	---	---	8.9	7.4	8.1	---	---	---	4.7	3.3	4.1
28	---	---	---	8.9	7.3	7.9	---	---	---	4.7	4.3	4.5
29	---	---	---	9.3	7.1	8.0	---	---	---	4.7	4.2	4.5
30	---	---	---	8.5	6.6	7.5	---	---	---	5.1	4.3	4.6
31	---	---	---	8.1	6.4	7.2	---	---	---	5.1	4.4	4.8
MONTH	11.0	7.8	9.4	11.6	6.4	9.7	8.3	6.1	7.3	8.1	3.3	5.4

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.1	4.5	4.9	7.7	5.2	6.9	---	---	---	5.8	3.7	4.7
2	5.0	4.6	4.8	7.5	4.7	6.5	---	---	---	5.6	3.6	4.7
3	4.9	4.4	4.7	7.9	4.6	6.4	---	---	---	5.4	3.7	4.7
4	4.8	4.3	4.6	7.9	4.7	6.4	---	---	---	6.4	3.7	4.8
5	4.7	4.2	4.5	8.0	4.8	6.4	---	---	---	6.8	4.0	5.3
6	4.4	3.8	4.1	7.5	4.7	6.3	---	---	---	7.0	4.6	6.1
7	4.1	3.4	3.8	7.3	4.2	5.9	---	---	---	6.1	3.0	4.9
8	3.7	3.2	3.5	7.3	4.0	5.7	---	---	---	5.4	1.8	3.9
9	3.7	2.9	3.3	7.2	3.9	5.7	---	---	---	5.7	2.1	4.0
10	3.6	2.5	3.2	7.3	3.7	5.6	5.4	2.7	4.0	4.9	1.6	3.6
11	4.3	2.5	3.4	7.2	3.5	5.4	5.2	2.4	4.2	4.4	1.2	3.3
12	4.0	2.3	3.2	6.9	3.2	5.2	6.5	4.0	5.4	4.8	1.4	3.4
13	4.1	2.2	3.2	6.3	2.8	4.8	7.1	4.8	6.2	4.9	1.9	3.5
14	4.7	2.2	3.6	5.9	2.5	4.5	7.1	4.7	6.2	5.7	2.3	4.5
15	5.6	3.5	4.4	5.3	2.3	4.2	7.1	4.2	5.9	5.0	3.0	4.1
16	6.1	3.9	4.6	5.4	2.0	4.0	6.9	4.5	5.9	5.0	2.8	4.0
17	6.4	3.7	4.8	4.8	1.5	3.5	7.0	4.7	6.0	4.7	2.9	3.9
18	6.1	3.6	4.7	4.9	1.3	3.2	6.9	5.1	6.1	5.1	3.0	4.1
19	7.3	3.4	5.3	4.0	1.3	2.9	6.7	4.6	5.7	5.2	3.4	4.4
20	7.1	3.7	5.5	---	---	---	6.4	4.3	5.5	6.3	3.7	5.1
21	7.4	3.5	5.6	---	---	---	6.4	4.4	5.5	6.2	3.3	5.3
22	7.4	4.5	6.0	---	---	---	6.3	4.0	5.3	6.2	3.5	5.0
23	7.4	4.3	6.0	---	---	---	6.4	4.1	5.5	6.0	3.9	5.2
24	7.4	4.1	6.0	---	---	---	6.6	4.5	5.7	6.2	3.9	5.3
25	7.7	4.3	6.4	---	---	---	6.9	4.4	5.7	6.1	3.5	5.1
26	8.0	5.0	6.8	---	---	---	6.3	4.0	5.3	5.3	2.8	4.3
27	8.1	5.2	7.0	---	---	---	6.0	4.1	5.1	4.7	2.4	3.7
28	7.8	5.0	6.8	---	---	---	5.9	3.6	4.8	4.7	2.3	3.6
29	7.8	5.0	6.8	---	---	---	6.0	4.0	5.0	4.3	1.9	3.2
30	8.0	5.3	6.9	---	---	---	5.7	3.8	4.9	4.7	1.7	3.4
31	---	---	---	---	---	---	5.7	3.6	4.7	---	---	---
MONTH	8.1	2.2	5.0	8.0	1.3	5.2	7.1	2.4	5.4	7.0	1.2	4.4

01482200 ARMY CREEK AT STATE ROAD, DE

LOCATION.--Lat 39°38'56", long 75°37'18", New Castle County, Hydrologic Unit 02040205, on left bank at downstream end of culvert on U.S. Highway 13, 0.2 mi (0.3 km) south of State Road, and 2.3 mi (3.7 km) upstream from mouth.
DRAINAGE AREA.--2.42 mi^2 (6.27 km^2).
PERIOD OF RECORD.--October 1978 to current year.
GAGE.--Water-stage recorder. Concrete control since Sept. 24, 1979. Altitude of gage is 10 ft (3.0 m), from topographic map.
REMARKS.--Records poor prior to Sept. 24, 1979, and good thereafter, except those below 0.10 ft^3/s (0.003 m^3/s), which are poor. Several observations of water temperature were made during the period October 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 184 ft^3/s (5.21 m^3/s) Jan. 21, 1979, gage height, 4.09 ft (1.247 m); minimum daily, 0.01 ft^3/s (<0.001 m^3/s) Aug. 10, 13, 14, Sept. 14, 15, 1980.
EXTREMES FOR PERIOD OCTOBER 1978 TO SEPTEMBER 1980.--Peak discharges above base of 65 ft^3/s (1.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 24, 1978	2345	91	2.58	2.83	0.863	Apr. 26, 1979	2045	82	2.32	2.64	0.805
Jan. 8, 1979	0045	103	2.92	3.07	0.936	July 23, 1979	2100	76	2.15	2.57	0.783
Jan. 21, 1979	0400	*184	5.21	4.09	1.247	Aug. 2, 1979	1715	123	3.48	3.31	1.009
Jan. 24, 1979	1930	142	4.02	3.35	1.021	Sept. 6, 1979	0245	116	3.29	3.28	1.000
Feb. 24, 1979	Unknown	Unknown		Unknown		Sept. 30, 1979	0430	162	4.59	4.14	1.262
Feb. 26, 1979	Unknown	Unknown		Unknown							
Nov. 26, 1979	1415	*69	1.95	3.13	0.954						

Water year 1979: Minimum daily discharge, 0.05 ft^3/s (0.001 m^3/s) Sept. 16, 1979.

Water year 1980: Minimum daily discharge, 0.01 ft^3/s (<0.001 m^3/s) Aug. 10, 13, 14, Sept. 14, 15, 1980.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	.10	.16	.85	.80	.40	.22	.19	.70	4.3	.44	.27
2	.08	.10	.13	23	.64	.34	.26	.18	1.0	.19	9.4	.27
3	.06	.10	.14	1.3	.60	.28	.35	.17	2.0	.12	6.0	.30
4	.07	.10	6.0	.44	.50	.27	.50	.18	4.0	.28	2.9	.21
5	.06	.11	8.3	.39	.42	.33	.70	.17	2.0	.17	.69	1.4
6	.29	.12	.22	.42	.36	4.7	.40	.17	1.0	.15	.54	24
7	.06	.13	.16	14	.33	.55	.30	.16	.50	.12	.45	.28
8	.06	.14	.21	32	.32	.34	.22	.15	.30	.12	.44	.19
9	.06	.12	21	.59	.31	.27	2.2	.15	.25	.12	.45	.16
10	.06	.10	1.4	.47	.32	.25	1.0	.50	.50	.12	.94	.17
11	.06	.10	.38	.41	.33	2.1	.50	.90	11	.12	.72	.19
12	.06	.10	.32	.37	.31	.28	.40	.50	.25	.12	1.8	.15
13	.06	.11	.31	1.6	.35	.25	.24	.20	.13	.11	.95	.12
14	.06	.12	.31	1.4	.30	.30	1.7	.18	.11	.11	.53	.22
15	.06	.16	.32	.47	.30	.25	.35	.15	.09	.11	.45	.10
16	.22	.19	.33	.40	.30	.21	.27	.50	.09	.09	.40	.05
17	.44	.28	.39	.38	.29	.21	.24	.90	.09	.09	.38	.10
18	.12	1.6	.35	.36	.33	.21	.22	.50	.09	2.4	.56	.06
19	.13	.12	.33	.33	.38	.20	.19	.30	.08	.14	.56	.41
20	.12	.09	.59	7.9	.42	.20	.18	.17	.08	.22	.41	.64
21	.12	.09	2.1	78	.80	.18	.18	.30	.08	.25	.52	5.1
22	.13	.09	.28	1.8	1.3	.18	.18	.80	.15	.22	.42	15
23	.13	.11	.31	1.1	3.0	.18	.18	2.0	.20	5.0	.35	7.0
24	.14	.15	12	47	70	1.9	.18	3.5	.11	2.9	.39	.98
25	.14	.09	15	6.5	64	.25	.94	4.0	.07	.62	.42	.13
26	.16	.08	.50	1.3	58	.21	12	1.0	.06	.56	.43	.11
27	.19	1.1	.39	1.0	1.4	.24	4.0	.40	.06	.52	1.9	.08
28	.10	.61	.32	1.1	.57	.22	1.0	1.0	.06	.47	.80	.07
29	.10	1.2	.30	1.4	---	.21	.84	.50	.07	.53	.51	.57
30	.10	1.6	.29	1.2	---	.20	.22	.30	1.8	.58	.68	32
31	.11	---	.48	1.0	---	.19	---	.40	---	.44	.31	---
TOTAL	3.88	9.11	73.32	228.48	206.98	15.90	30.14	20.52	26.92	21.29	35.74	90.33
MEAN	.13	.30	2.37	7.37	7.39	.51	1.01	.66	.90	.69	1.15	3.01
MAX	.44	1.6	21	78	70	4.7	12	4.0	11	5.0	9.4	32
MIN	.06	.08	.13	.33	.29	.18	.18	.15	.06	.09	.31	.05
CFSM	.05	.12	.98	3.05	3.05	.21	.42	.27	.37	.29	.48	1.24
IN.	.06	.14	1.13	3.51	3.18	.24	.46	.32	.41	.33	.55	1.39

WTR YR 1979 TOTAL 762.63 MEAN 2.09 MAX 78 MIN .05 CFSM .86 IN 11.72

01482200 ARMY CREEK AT STATE ROAD, DE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	.18	.39	.33	.19	.12	5.0	6.7	.22	.17	.37	.03
2	.97	.49	.36	.34	.15	.18	1.6	1.4	.20	.11	.06	.03
3	.88	3.7	.31	.34	.15	.26	1.1	.86	.48	.29	.30	.03
4	.30	.54	.33	.28	.18	.31	4.5	.62	.41	.13	.27	.03
5	.54	.33	.34	.29	.18	.86	1.4	.52	.08	.07	.08	.12
6	.29	.29	1.1	.30	.17	.44	.86	.42	.19	.12	.04	.03
7	.46	.28	1.1	.36	.22	.33	.73	.56	1.8	.04	.02	.03
8	.17	.25	.48	.39	.22	1.3	.65	1.1	2.6	.06	.04	.03
9	.80	.24	.39	.33	.23	1.3	6.4	.47	.44	.05	.02	.02
10	11	.61	.39	.25	.25	1.0	6.6	.36	.81	.04	.01	.02
11	1.2	2.6	.37	9.4	.20	1.9	1.3	.32	.21	.12	.06	.02
12	1.5	2.8	.36	5.3	.21	.51	.91	.74	.13	.06	.07	.02
13	.91	.61	2.3	.75	.19	9.7	.74	.62	.11	.05	.01	.02
14	.42	.66	.81	.64	.22	8.8	2.0	.31	.09	.03	.01	.01
15	.31	.39	.40	.58	.24	1.3	2.0	.21	1.2	.03	.02	.01
16	.26	.37	.49	.48	1.3	.71	.78	.18	2.8	.32	.02	.03
17	.22	.32	.53	.40	.35	1.1	.59	.17	.24	.18	.02	.02
18	.21	.31	.29	3.7	.23	1.7	.54	2.6	.18	.04	.02	1.8
19	.20	.28	.28	3.4	.24	.64	.51	2.0	.15	.04	.26	.04
20	.19	.27	.33	.86	.28	.61	.48	.89	.10	.04	.07	.03
21	.31	.25	.31	.68	.35	11	.44	2.1	.11	.03	.03	.03
22	.18	.25	.39	1.5	2.5	2.0	.39	.55	.09	1.7	.03	.03
23	.92	.26	.36	1.3	.83	.89	.38	.34	.08	.77	.03	.03
24	3.1	.31	.45	.51	.57	1.9	.44	.28	.08	.12	.03	.03
25	.36	.26	3.0	.47	.45	7.5	.38	.26	.06	.06	.02	.57
26	.25	22	.61	.40	.34	1.1	.39	.17	.04	.05	.02	.12
27	.21	1.9	.43	.36	.28	.75	2.6	.14	.04	.05	.02	.03
28	.36	.79	.33	.38	.27	.74	7.7	.13	2.0	.03	.02	.02
29	.25	.55	.32	.34	.22	16	7.1	.12	4.0	.56	.02	.02
30	.20	.44	.31	.26	---	2.4	7.2	.36	.90	.08	.02	.02
31	.19	---	.30	.24	---	16	---	1.2	---	.05	.03	---
TOTAL	32.46	42.53	18.16	35.16	11.21	93.35	65.71	26.70	19.84	6.29	2.04	3.27
MEAN	1.05	1.42	.59	1.13	.39	3.01	2.19	.86	.66	.20	.066	.11
MAX	11	22	3.0	9.4	2.5	16	7.7	6.7	4.0	1.7	.37	1.8
MIN	.17	.18	.28	.24	.15	.12	.38	.12	.04	.03	.01	.01
CFSM	.43	.59	.24	.47	.16	1.24	.91	.36	.27	.08	.03	.05
IN.	.50	.65	.28	.54	.17	1.43	1.01	.41	.30	.10	.03	.05

CAL YR 1979 TOTAL 769.47 MEAN 2.11 MAX 78 MIN .05 CFSM .87 IN 11.82
WTR YR 1980 TOTAL 356.72 MEAN .97 MAX 22 MIN .01 CFSM .40 IN 5.48

01482298 RED LION CREEK NEAR RED LION, DE

LOCATION.--Lat 39°36'16", long 75°40'06", New Castle County, Hydrologic Unit 02040205, on left bank at downstream side of culvert on U.S. Highway 301S, 0.2 mi (0.3 km) southwest of Red lion, and 3.4 mi (5.5 km) upstream from mouth.

DRAINAGE AREA.--3.08 mi² (7.98 km²).

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 12 ft (3.7 m), from topographic map.

REMARKS.--Records fair except those below 1.0 ft³/s (0.028 m³/s), which are poor. Several observations of water temperature were made during the period October 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 425 ft³/s (12.0 m³/s) Feb. 26, 1979, gage height, 6.51 ft (1.984 m); minimum daily, 0.09 ft³/s (0.003 m³/s) Sept. 15, 16, 1980.

EXTREMES FOR PERIOD OCTOBER 1978 TO SEPTEMBER 1980.--Peak discharges above base of 100 ft³/s (2.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 25, 1978	0130	239	6.77	5.76	1.756	Feb. 25, 1979	0745	278	7.87	5.92	1.804
Jan. 2, 1979	1300	179	5.07	5.48	1.670	Feb. 26, 1979	0945	*425	12.0	6.51	1.984
Jan. 7, 1979	2400	221	6.26	5.68	1.731	Apr. 26, 1979	2145	119	3.37	5.14	1.567
Jan. 21, 1979	0315	286	8.10	5.95	1.814	Sept. 6, 1979	Unknown	Unknown		Unknown	
Jan. 24, 1979	1830	165	4.67	5.42	1.652						
Nov. 26, 1979	1530	*190	5.38	5.53	1.686	Mar. 13, 1980	2115	107	3.03	5.13	1.564

Water year 1979: Minimum daily discharge, 0.36 ft³/s (0.010 m³/s) Oct. 13, 1978.

Water year 1980: Minimum daily discharge, 0.09 ft³/s (0.003 m³/s) Sept. 15, 16, 1980.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.1	2.8	6.7	7.4	6.2	1.5	2.5	4.9	3.3	.53	.47
2	.80	1.0	4.0	86	6.2	5.0	2.1	2.3	2.4	1.1	1.0	.48
3	.76	.86	8.0	13	6.4	3.9	2.4	2.2	7.3	.85	2.2	.50
4	.76	.68	12	3.7	6.7	3.4	2.9	2.2	21	1.2	1.6	.56
5	1.0	.45	21	3.0	7.0	3.9	3.4	2.3	4.2	1.1	.67	5.0
6	.90	.41	17	3.0	5.0	13	1.9	2.0	2.7	.79	.58	35
7	.60	.49	8.8	32	4.4	6.3	1.6	1.8	2.1	.73	.56	5.0
8	.45	.45	11	59	4.0	3.5	1.5	1.7	1.8	.70	.56	1.0
9	.45	.47	15	7.3	3.7	2.5	7.5	1.6	1.6	.68	.53	.70
10	.45	.52	24	4.0	3.3	2.2	8.4	1.5	1.5	.68	1.2	.70
11	.44	.63	5.0	2.9	3.3	8.8	4.2	1.4	13	.67	1.6	.60
12	.38	.88	4.0	2.6	2.9	3.3	4.3	1.8	3.5	.63	4.6	.60
13	.36	1.2	3.3	4.0	2.6	2.6	4.2	8.3	2.0	.62	1.5	.50
14	.40	1.7	2.2	7.9	2.8	2.9	12	5.7	1.6	1.3	.61	.45
15	.57	2.5	2.2	3.4	2.9	2.4	5.7	2.6	1.4	.79	.54	1.3
16	.71	3.2	2.1	2.4	2.7	2.1	4.2	2.0	1.3	.63	.50	.50
17	1.2	3.8	2.2	2.3	2.7	2.0	3.7	1.7	1.3	.60	.46	.46
18	.49	5.4	2.1	2.1	3.3	1.9	3.4	2.0	1.2	.65	.53	.42
19	.49	1.6	2.1	1.9	3.4	1.8	3.1	2.4	1.1	.62	.61	.40
20	.50	1.4	2.3	11	3.4	1.8	3.0	2.0	1.1	.67	.52	.50
21	.53	1.4	6.2	134	3.4	1.7	2.8	1.8	1.1	.61	.62	.50
22	.57	1.4	2.7	8.5	3.8	1.6	2.7	1.6	1.3	.59	.53	15
23	.69	1.5	2.3	3.9	6.4	1.6	2.6	2.6	1.3	4.9	.48	8.0
24	.95	2.0	26	50	33	4.5	2.5	6.2	1.1	2.7	.53	3.0
25	1.0	1.8	56	14	158	3.8	8.4	6.5	1.1	.84	.90	.80
26	1.0	2.0	5.2	6.6	155	2.1	21	2.5	1.0	.67	1.3	.70
27	1.2	4.0	3.7	5.3	15	1.7	16	1.9	1.0	.58	1.7	.66
28	1.1	4.7	2.8	6.6	8.4	1.6	5.0	1.7	1.0	.56	1.2	.62
29	1.1	7.0	2.4	8.0	---	1.6	3.6	1.6	1.0	.58	.90	5.0
30	1.1	4.0	2.2	11	---	1.6	2.9	1.5	1.8	.58	3.5	20
31	1.1	---	3.2	9.0	---	1.5	---	1.5	---	.56	1.6	---
TOTAL	23.15	58.54	263.8	515.1	467.1	102.8	148.5	79.4	88.7	31.48	34.16	109.42
MEAN	.75	1.95	8.51	16.6	16.7	3.32	4.95	2.56	2.96	1.02	1.10	3.65
MAX	1.2	7.0	56	134	158	13	21	8.3	21	4.9	4.6	35
MIN	.36	.41	2.1	1.9	2.6	1.5	1.5	1.4	1.0	.56	.46	.40
CFSM	.24	.63	2.76	5.39	[illegible]	1.08	1.61	.83	.96	.33	.36	1.19
IN.	.28	.71	3.19	6.22	5.64	1.24	1.79	.96	1.07	.38	.41	1.32

WTR YR 1979 TOTAL 1922.15 MEAN 5.27 MAX 158 MIN .36 CFSM 1.71 IN 23.21

01482298 RED LION CREEK NEAR RED LION, DE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	2.0	3.0	2.1	2.9	1.7	15	14	1.3	1.1	.48	.18
2	5.0	2.1	2.8	2.0	2.7	2.0	8.6	10	1.2	.93	.47	.18
3	2.8	10	2.4	1.9	2.6	2.0	6.2	8.0	1.3	1.2	.52	.15
4	2.5	4.5	2.5	1.8	2.7	2.2	12	7.0	1.2	.95	.71	.16
5	3.0	3.5	2.4	2.0	2.7	3.7	7.4	5.0	1.1	.83	.57	.17
6	2.9	3.3	3.4	1.8	2.7	2.9	4.9	4.0	1.1	.72	.49	.16
7	2.3	3.1	5.6	2.0	2.9	2.4	4.2	4.5	3.3	.64	.41	.14
8	2.1	3.0	3.1	2.3	2.8	3.2	3.8	5.0	12	.71	.40	.13
9	2.2	2.9	2.5	2.1	2.8	4.4	13	4.0	2.1	.66	.39	.12
10	22	3.7	2.4	1.8	2.9	2.9	16	4.0	2.2	.69	.36	.12
11	7.7	6.7	2.4	19	2.6	5.1	5.5	3.5	1.5	.62	.45	.10
12	6.4	9.6	2.3	18	2.7	2.6	4.1	4.5	1.3	.57	.48	.10
13	6.0	4.1	6.3	6.5	2.6	20	5.0	4.0	1.2	.50	.43	.11
14	4.0	3.9	5.1	5.7	2.7	25	7.0	3.5	1.1	.48	.37	.10
15	3.0	3.3	3.3	5.0	2.9	6.4	10	2.5	2.3	.47	.38	.09
16	2.5	3.1	3.1	4.3	5.0	3.6	6.0	2.2	9.0	.49	.35	.09
17	2.3	2.8	3.2	4.1	3.7	4.0	6.0	1.8	2.0	.56	.29	.48
18	2.2	2.7	2.3	10	3.0	5.6	6.0	6.2	1.4	.48	.33	.59
19	2.0	2.5	2.3	13	3.0	2.9	5.0	3.0	1.3	.45	1.1	.25
20	1.9	2.4	2.3	6.9	3.1	2.5	5.0	2.5	1.1	.44	.50	.19
21	2.0	2.3	2.4	5.6	3.5	21	4.5	5.0	1.0	.44	.38	.18
22	1.8	2.2	2.9	6.6	6.2	9.0	4.5	2.6	.98	1.6	.37	.16
23	2.4	2.2	2.9	8.2	6.6	4.5	4.0	1.9	.92	1.1	.37	.16
24	9.1	2.2	3.0	5.3	4.9	4.3	4.5	1.7	.90	.71	.32	.11
25	3.5	2.2	9.0	4.9	4.3	16	4.0	1.6	.89	.55	.28	.29
26	2.7	57	4.5	4.5	3.7	5.7	4.5	1.4	.87	.51	.26	.22
27	2.4	11	3.1	4.2	2.9	3.9	8.0	1.4	.87	.46	.22	.15
28	2.5	6.1	2.7	4.3	2.3	3.2	17	1.3	.83	.43	.21	.16
29	2.4	5.1	2.5	4.0	2.0	34	15	1.3	2.4	.56	.22	.17
30	2.1	3.4	2.4	3.4	---	11	16	1.3	2.2	.49	.20	.16
31	2.0	---	2.2	3.3	---	28	---	1.6	---	.43	.22	---
TOTAL	125.7	172.9	100.3	166.6	95.4	245.7	232.1	120.3	60.86	20.77	12.53	5.37
MEAN	4.05	5.76	3.24	5.37	3.29	7.93	7.74	3.88	2.03	.67	.40	.18
MAX	22	57	9.0	19	6.6	34	17	14	12	1.6	1.1	.59
MIN	1.8	2.0	2.2	1.8	2.0	1.7	3.8	1.3	.83	.43	.20	.09
CFSM	1.32	1.87	1.05	1.74	1.07	2.58	2.51	1.26	.66	.22	.13	.06
IN.	1.52	2.09	1.21	2.01	1.15	2.97	2.80	1.45	.73	.25	.15	.06

CAL YR 1979 TOTAL 1975.56 MEAN 5.41 MAX 158 MIN .40 CFSM 1.76 IN 23.85
WTR YR 1980 TOTAL 1358.53 MEAN 3.71 MAX 57 MIN .09 CFSM 1.21 IN 16.40

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

LOCATION.--Lat 39°30'03", long 75°34'07", New Castle County, Hydrologic Unit 02040205, water-quality recorder located on platform about 0.4 mi (0.6 km) downstream from Reedy Island near Port Penn.

DRAINAGE AREA.--11,200 mi² (29,100 km²), approximately.

PERIOD OF RECORD.--October 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: February 1970 to current year.
WATER TEMPERATURES: February 1970 to current year.
DISSOLVED OXYGEN: February 1970 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 35,600 micromhos Nov. 15, 1978; minimum, 100 micromhos on several days during August 1969, April 1970, February 1974, January, February, and March 1979.
pH: Maximum, 8.8 units Aug. 29, Sept. 2, 1973; minimum, 5.4 units Dec. 31, 1972.
WATER TEMPERATURES: Maximum, 31.5°C July 21, 1977; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 17.1 mg/L Dec. 16, 19, 1976; minimum, 0.3 mg/L Sept. 16, 17, 1971.

NOTE: For 1980 water-year data on this station see U.S. Geological Survey Water-Data Report PA-80-1. Data for this station will also appear in U.S. Geological Survey Water-Data Report MD-DE-81-1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)
APR 28...	0930	1630	7.0	13.5	36	210	180	26	35	280	13	33

DATE	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS P)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
APR 28...	0	27	5.3	.02	98	470	1020	1.7	1.9	3.7	.39

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOT IN BOTTOM MATERIAL (MG/KG AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)
APR 28...	.47	.91	1.3	410	3.2	414	.170	47	0	10	10

DATE	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)
APR 28...	10	10	3700	10	960	.02	0	50	3.4	1.2	.0

DATE	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)
APR 28...	0	.0	0	.0	.0	.0	.0	.0	.0	.0	0

01483170 DRAWYER CREEK TRIBUTARY NEAR ODESSA, DE

LOCATION.--Lat 39°27'45", long 75°41'17", New Castle County, Hydrologic Unit 02040205, on right bank at downstream side of highway bridge, 1.5 mi (2.4 km) northwest of Odessa, and 2.4 mi (3.9 km) upstream from mouth.

DRAINAGE AREA.--4.68 mi² (12.1 km²).

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4 ft (1.2 m), from topographic map.

REMARKS.--Records fair prior to September 1980 and poor thereafter. Several observations of water temperature were made during the period October 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210 ft³/s (5.95 m³/s) Feb. 26, 1979, gage height, 4.4 ft (1.34 m), from highwater mark; minimum daily, 1.6 ft³/s (0.045 m³/s) July 31, Aug. 1, 1979.

EXTREMES FOR PERIOD OCTOBER 1978 TO SEPTEMBER 1980.--Peak discharges above base of 50 ft³/s (1.4 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 21, 1979	0300	190	5.38	4.29	1.308	June 11, 1979	1100	85	2.41	3.56	1.085
Jan. 24, 1979	1830	81	2.29	3.56	1.085	Sept. 6, 1979	0500	57	1.61	3.34	1.018
Feb. 26, 1979	Unknown	*210	5.95	a4.4	1.34	Sept. 30, 1979	0400	161	4.56	4.12	1.256
May 13, 1979	1800	58	1.64	3.26	0.994						
Nov. 26, 1979	1700	56	1.59	3.31	1.009	June 16, 1980	0130	*107	3.03	3.78	1.152
Apr. 10, 1980	0115	58	1.64	3.33	1.015	June 29, 1980	2245	107	3.03	3.78	1.152

a From highwater mark outside of well.

Water year 1979: Minimum daily discharge, 1.6 ft³/s (0.045 m³/s) July 31, Aug. 1, 1979.

Water year 1980: Minimum daily discharge, 1.8 ft³/s (0.051 m³/s) July 27, Aug. 9, 1980.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.8	3.2	4.8	4.8	8.0	4.4	3.7	18	11	1.6	2.1
2	2.7	3.7	3.1	19	4.6	6.9	5.3	3.5	6.1	3.5	2.3	2.1
3	2.6	3.3	3.0	11	4.5	5.8	5.0	3.5	13	3.0	2.3	2.2
4	2.7	3.5	6.0	4.6	4.5	5.4	5.0	3.5	23	2.9	2.4	2.2
5	2.9	3.6	7.9	4.3	4.4	5.4	5.2	3.5	7.7	3.1	1.9	3.5
6	3.0	3.7	3.4	4.1	3.9	17	4.6	3.4	6.0	2.9	1.8	24
7	2.8	3.7	3.0	9.9	3.9	10	4.4	3.3	5.0	2.8	1.8	3.0
8	2.7	3.8	3.0	27	3.9	6.4	4.4	3.2	4.4	2.8	1.8	2.5
9	2.6	3.9	12	6.9	3.9	5.6	7.6	3.2	3.8	2.7	1.8	2.4
10	2.5	3.9	6.7	4.8	4.0	5.2	8.9	3.1	3.6	2.7	1.8	2.4
11	2.4	3.9	3.7	4.4	4.2	11	5.4	3.1	26	2.7	2.4	2.4
12	2.4	3.9	3.4	4.3	4.4	5.8	6.5	3.1	6.2	2.7	3.6	2.4
13	2.5	3.9	3.3	4.6	4.6	5.2	6.3	21	4.0	2.7	2.6	2.4
14	2.8	3.9	3.3	6.8	4.4	5.1	11	17	3.7	2.7	2.1	2.5
15	3.4	3.9	3.3	4.8	4.1	4.8	6.8	6.0	3.4	2.6	2.0	2.6
16	3.4	3.9	3.3	4.3	3.9	4.6	5.7	4.8	3.3	2.3	1.9	2.5
17	4.5	4.1	3.4	4.1	3.6	4.7	5.2	4.4	3.3	2.3	1.9	2.5
18	3.6	5.0	3.7	4.1	3.8	4.7	4.8	4.3	3.3	2.2	1.9	2.5
19	3.5	4.3	3.8	3.3	5.0	4.7	4.5	4.4	3.2	2.2	1.9	2.6
20	3.5	4.1	4.1	17	6.5	4.7	4.3	4.4	3.1	2.1	1.8	2.6
21	3.5	4.0	6.2	118	10	4.6	4.3	4.3	3.0	2.1	1.8	2.8
22	3.5	3.9	4.6	13	14	4.5	4.3	4.2	3.0	2.1	1.9	11
23	3.5	3.9	4.4	6.0	25	4.5	4.2	4.3	3.0	9.9	2.0	6.9
24	3.5	3.9	7.9	34	40	6.2	4.1	11	3.0	5.1	2.3	3.0
25	3.5	3.9	21	20	70	6.3	4.1	6.8	3.0	2.1	2.3	2.9
26	3.6	3.9	5.3	7.2	120	5.0	7.3	4.9	3.0	2.0	2.5	2.8
27	3.7	4.6	4.5	5.9	19	4.7	10	4.4	2.8	1.9	3.3	2.8
28	3.9	4.3	4.2	5.7	10	4.5	4.8	4.1	2.7	1.8	3.0	2.9
29	3.5	3.9	4.0	6.5	---	4.4	4.2	4.1	2.4	1.7	2.4	10
30	3.6	4.6	3.9	5.6	---	4.4	3.9	4.1	3.4	1.7	2.3	41
31	3.7	---	4.0	5.2	---	4.4	---	4.0	---	1.6	2.2	---
TOTAL	98.5	118.7	156.6	381.2	394.9	184.5	166.5	162.6	179.4	93.9	67.6	157.5
MEAN	3.18	3.96	5.05	12.3	14.1	5.95	5.55	5.25	5.98	3.03	2.18	5.25
MAX	4.5	5.0	21	118	120	17	11	21	26	11	3.6	41
MIN	2.4	3.3	3.0	3.3	3.6	4.4	3.9	3.1	2.4	1.6	1.6	2.1
CFSM	.68	.85	1.08	2.63	3.01	1.27	1.19	1.12	1.28	.65	.47	1.12
IN.	.78	.94	1.24	3.03	3.14	1.47	1.32	1.29	1.43	.75	.54	1.25

WTR YR 1979 TOTAL 2161.9 MEAN 5.92 MAX 120 MIN 1.6 CFSM 1.27 IN 17.18

01483170 DRAWYER CREEK TRIBUTARY NEAR ODESSA, DE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	3.3	4.2	4.0	3.5	3.5	16	16	4.3	3.0	2.1	2.0
2	5.5	3.4	4.1	4.0	3.3	3.7	8.0	7.6	4.1	2.8	2.0	2.0
3	5.1	9.5	4.0	4.0	3.3	3.7	6.8	6.5	4.8	3.0	2.9	2.0
4	4.1	4.9	4.0	3.9	3.3	3.7	13	5.9	4.8	3.0	2.6	2.0
5	3.9	4.1	4.0	4.0	3.3	4.3	8.9	5.3	4.3	2.6	2.2	2.4
6	3.9	4.0	4.3	3.9	3.4	4.5	6.6	5.1	4.3	2.5	2.0	2.3
7	3.8	4.0	5.2	3.9	3.5	4.2	6.2	4.9	5.1	2.5	1.9	2.2
8	3.7	4.0	4.2	3.9	3.5	4.2	5.8	5.3	9.8	2.5	2.0	2.2
9	3.9	4.1	4.0	3.9	3.5	4.5	11	5.4	5.1	2.6	1.8	2.1
10	21	4.4	4.0	3.8	3.6	4.2	25	5.0	5.2	2.5	1.9	2.1
11	7.8	7.1	4.0	9.1	3.8	4.3	8.3	4.8	4.8	2.4	2.1	2.1
12	5.3	11	4.0	13	3.8	4.4	7.2	4.8	4.5	2.4	3.5	2.1
13	5.6	5.6	5.9	4.7	3.6	11	6.8	5.0	4.3	2.3	2.2	2.0
14	4.4	5.3	5.4	4.5	3.5	18	7.7	4.6	4.3	2.3	2.1	2.0
15	3.9	5.2	4.3	4.3	3.5	6.3	8.7	4.4	7.0	2.2	2.2	2.0
16	3.6	5.2	4.3	4.1	4.6	5.1	6.8	4.1	31	2.2	2.2	2.0
17	3.6	4.9	4.1	4.1	4.3	5.2	6.1	4.1	4.1	2.3	2.1	2.1
18	3.5	4.8	3.9	6.5	3.8	6.0	5.6	6.9	3.6	2.3	2.1	5.3
19	3.4	4.6	3.9	12	3.7	5.1	5.6	5.9	3.3	2.2	3.0	2.2
20	3.4	4.5	3.9	5.0	3.8	5.1	5.6	5.8	3.1	1.9	2.4	2.2
21	3.3	4.4	3.9	4.5	3.8	16	5.5	6.3	3.0	1.9	2.2	2.1
22	3.4	4.4	4.0	4.9	4.7	9.8	5.2	5.6	2.9	2.1	2.2	2.1
23	3.6	4.3	4.1	6.7	5.0	6.1	5.1	4.8	2.9	2.5	2.4	2.1
24	7.1	4.3	4.1	4.3	4.7	6.2	5.1	4.7	2.8	2.3	2.4	2.1
25	4.4	4.2	7.7	4.1	4.3	15	5.1	4.6	2.8	2.1	2.2	2.8
26	3.9	25	4.9	4.0	4.1	6.7	5.7	4.4	2.8	2.0	2.1	2.1
27	3.8	10	4.3	4.0	3.9	5.6	7.0	4.1	2.8	1.8	2.0	2.0
28	3.8	5.3	4.0	4.0	3.9	5.3	11	4.1	2.9	2.0	2.0	2.0
29	3.7	4.8	4.0	4.0	3.7	22	12	4.0	20	2.4	2.0	2.0
30	3.6	4.4	4.0	3.8	---	10	9.9	4.0	12	2.2	2.1	2.0
31	3.4	---	4.0	3.8	---	21	---	4.2	---	2.1	2.0	---
TOTAL	151.4	175.0	134.7	154.7	110.7	234.7	247.3	168.2	176.7	72.9	68.9	66.6
MEAN	4.88	5.83	4.35	4.99	3.82	7.57	8.24	5.43	5.89	2.35	2.22	2.22
MAX	21	25	7.7	13	5.0	22	25	16	31	3.0	3.5	5.3
MIN	3.3	3.3	3.9	3.8	3.3	3.5	5.1	4.0	2.8	1.8	1.8	2.0
CFSM	1.04	1.25	.93	1.07	.82	1.62	1.76	1.16	1.26	.50	.47	.47
IN.	1.20	1.39	1.07	1.23	.88	1.87	1.97	1.34	1.40	.58	.55	.53

CAL YR 1979 TOTAL 2249.2 MEAN 6.16 MAX 120 MIN 1.6 CFSM 1.32 IN 17.87
WTR YR 1980 TOTAL 176[illegible].8 MEAN 4.81 MAX 31 MIN 1.8 CFSM 1.03 IN 14.00

01483200 BLACKBIRD CREEK AT BLACKBIRD, DE

LOCATION.--Lat 39°21'58", long 75°40'10", New Castle County, Hydrologic Unit 02040205, on right bank 15 ft (5 m) downstream from highway bridge, 0.5 mi (0.8 km) upstream from Barlow Branch, 0.6 mi (1.0 km) southwest of Blackbird, 5.6 mi (9.0 km) northwest of Smyrna, and 13.8 mi (22.2 km) upstream from mouth.

DRAINAGE AREA.--3.85 mi^2 (9.97 km^2).

PERIOD OF RECORD.--Annual maximum, water years 1952-56, and occasional low-flow measurements, water years 1952-53, 1955-56. October 1956 to current year.

GAGE.--Water-stage recorder. Concrete control since May 23, 1968. Datum of gage is 18.89 ft (5.758 m) National Geodetic Vertical Datum of 1929. Mar. 5, 1951, to Oct. 16, 1956, nonrecording gage and crest-stage gage at site 15 ft (5 m) upstream at same datum.

REMARKS.--Records good except those for September, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 4.86 ft^3/s (0.138 m^3/s), 17.14 in/yr (435 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 712 ft^3/s (20.2 m^3/s) June 22, 1972, gage height, 5.04 ft (1.536 m), from rating curve extended above 200 ft^3/s (5.66 m^3/s) on basis of Type III culvert measurement of peak flow; no flow at times during 1964, 1965, 1966, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft^3/s (1.4 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 10	0830	88	2.49	2.51	0.765	June 16	0545	*183	5.18	3.08	0.939

Minimum daily discharge, 0.15 ft^3/s (0.004 m^3/s) Sept. 12, 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	3.7	4.2	3.5	2.8	2.4	27	27	2.3	2.5	1.3	.23
2	8.9	3.9	4.2	3.5	2.5	2.7	12	14	2.0	1.9	1.1	.23
3	6.9	9.3	4.0	3.4	2.5	2.8	9.2	8.9	2.0	5.3	.89	.22
4	4.7	7.8	4.0	3.4	2.8	3.3	19	7.3	2.2	6.3	.74	.21
5	4.6	4.7	4.0	3.9	2.9	5.9	22	6.3	1.7	2.2	.64	.26
6	5.7	4.3	4.3	4.0	3.0	4.4	10	5.6	1.8	1.8	.57	.52
7	3.8	4.2	5.8	4.1	3.1	3.3	8.4	4.9	3.9	1.5	.52	.23
8	3.3	3.8	4.3	4.9	3.1	3.5	7.7	6.1	12	1.7	.41	.22
9	4.5	3.8	3.9	4.2	3.2	3.7	14	5.9	3.4	1.8	.33	.24
10	23	4.1	3.8	3.5	3.4	3.0	52	4.7	2.9	1.6	.29	.18
11	22	6.3	3.8	7.3	3.1	3.7	17	4.5	2.3	1.5	1.0	.17
12	9.1	14	4.0	19	3.2	2.8	11	5.0	2.0	1.3	8.5	.15
13	12	8.3	6.5	7.4	2.8	7.2	9.3	7.3	2.0	1.2	1.6	.15
14	12	6.3	7.1	5.3	2.9	23	9.8	4.3	2.1	1.0	.97	.15
15	6.6	5.1	4.6	4.8	3.2	8.3	15	3.6	8.3	.97	.76	.17
16	5.4	4.6	4.5	4.3	5.9	5.1	9.5	3.3	84	.92	1.0	.18
17	5.1	4.3	4.3	4.2	4.4	5.2	7.5	3.2	8.5	1.2	.54	.39
18	4.9	4.2	3.5	6.4	2.9	7.5	7.1	8.9	3.7	1.0	.52	17
19	4.7	4.2	3.6	16	3.0	5.0	6.8	6.6	2.7	.82	1.7	3.1
20	4.7	4.2	3.8	7.2	3.3	4.5	6.5	5.8	2.3	.77	1.7	.86
21	4.5	4.1	3.8	5.2	3.8	12	6.0	9.0	2.0	.64	.91	.75
22	4.4	4.0	4.2	5.9	5.6	13	5.6	5.6	1.9	.91	.80	.57
23	4.4	4.0	4.2	9.5	4.9	6.5	5.4	3.9	1.8	2.4	.78	.40
24	7.2	4.0	4.1	5.3	4.6	5.9	5.4	3.5	1.7	1.5	.66	.34
25	5.4	4.0	7.9	4.9	4.1	18	6.2	3.4	1.7	1.0	.60	1.4
26	4.2	13	5.4	4.4	3.5	8.9	6.5	2.7	1.7	.82	.45	1.5
27	4.0	14	4.2	4.1	3.0	6.2	8.9	2.4	1.8	.60	.40	.57
28	4.1	6.6	3.9	4.2	3.0	5.6	14	2.3	1.6	.54	.38	.45
29	4.1	5.0	3.7	4.0	2.8	28	22	2.2	6.3	14	.37	.43
30	3.8	4.4	3.6	3.3	---	21	13	2.1	16	4.1	.32	.39
31	3.6	---	3.6	3.3	---	23	---	2.4	---	1.5	.25	---
TOTAL	211.5	174.2	136.8	174.4	99.3	255.4	373.8	182.7	188.6	65.29	31.00	31.66
MEAN	6.82	5.81	4.41	5.63	3.42	8.24	12.5	5.89	6.29	2.11	1.00	1.06
MAX	23	14	7.9	19	5.9	28	52	27	84	14	8.5	17
MIN	3.3	3.7	3.5	3.3	2.5	2.4	5.4	2.1	1.6	.54	.25	.15
CFSM	1.77	1.51	1.15	1.46	.89	2.14	3.25	1.53	1.63	.55	.26	.28
IN.	2.04	1.68	1.32	1.68	.96	2.47	3.61	1.76	1.82	.63	.30	.31

CAL YR 1979 TOTAL 2847.11 MEAN 7.80 MAX 173 MIN .60 CFSM 2.03 IN 27.50
WTR YR 1980 TOTAL 1924.65 MEAN 5.26 MAX 84 MIN .15 CFSM 1.37 IN 18.59

01483700 ST. JONES RIVER AT DOVER, DE

LOCATION.--Lat 39°09'49", long 75°31'10", Kent County, Hydrologic Unit 02040207, on left bank 150 ft (46 m) upstream from Division Street Bridge in Dover, 1,950 ft (594 m) downstream from Silver Lake, and 12.5 mi (20.1 km) upstream from mouth.

DRAINAGE AREA.--31.9 mi² (82.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1958 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 0.00 ft (0.000 m) National Geodetic Vertical Datum of 1929. Prior to June 1973, at datum 0.50 ft (0.152 m) higher.

REMARKS.--Water-discharge records good. Flow affected by Silver Lake. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 37.6 ft³/s (1.065 m³/s), 16.01 in/yr (407 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,900 ft³/s (53.8 m³/s) Sept. 13, 1960, gage height, 9.45 ft (2.880 m), from floodmark; no flow at times in 1959, 1961, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 524 ft³/s (14.8 m³/s) July 30, gage height, 5.69 ft (1.734 m); minimum, 3.5 ft³/s (0.099 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	27	39	26	24	25	198	168	34	102	44	7.3
2	29	29	35	25	24	25	159	173	22	38	23	6.4
3	53	57	33	24	19	25	99	113	24	42	21	5.9
4	111	79	32	27	19	27	82	68	41	96	31	4.9
5	74	79	31	27	20	39	91	50	35	106	29	12
6	38	62	38	27	21	44	79	40	21	56	16	16
7	29	52	49	31	22	37	58	34	56	26	14	11
8	23	43	52	35	23	35	49	33	113	21	11	6.8
9	27	40	40	34	24	32	59	38	103	21	10	5.9
10	77	41	34	30	25	30	91	33	48	19	8.7	7.7
11	140	61	32	60	25	34	106	29	29	16	10	6.4
12	138	100	32	146	26	30	76	28	22	15	74	5.6
13	116	124	42	135	23	60	55	27	17	13	109	5.2
14	120	102	56	80	23	100	49	26	17	10	61	5.9
15	111	79	59	56	25	140	56	21	22	8.7	26	5.9
16	78	67	45	48	35	70	56	18	86	9.2	26	3.7
17	56	58	38	43	44	53	43	16	79	9.2	16	4.9
18	47	49	31	54	31	61	38	35	39	10	12	53
19	40	47	30	94	28	58	37	50	25	9.8	44	61
20	38	44	31	103	29	48	34	33	19	10	100	28
21	34	43	30	70	31	61	33	35	16	7.7	94	13
22	32	40	30	58	39	91	31	34	14	18	40	10
23	30	39	30	71	44	85	29	26	13	73	24	9.2
24	43	39	30	76	40	64	27	22	13	86	18	6.4
25	48	38	40	56	38	113	31	36	13	39	13	53
26	50	61	47	47	35	132	32	55	14	19	11	76
27	43	81	40	41	29	90	53	30	20	13	10	55
28	37	84	31	38	29	64	88	19	20	9.8	9.8	19
29	33	61	28	37	29	115	140	15	41	221	8.2	18
30	31	45	26	32	---	200	148	14	110	422	8.7	8.7
31	29	---	26	28	---	180	---	28	---	134	7.7	---
TOTAL	1779	1771	1137	1659	824	2168	2127	1347	1126	1680.4	930.1	523.8
MEAN	57.4	59.0	36.7	53.5	28.4	69.9	70.9	43.5	37.5	54.2	30.0	17.5
MAX	140	124	59	146	44	200	198	173	113	422	109	76
MIN	23	27	26	24	19	25	27	14	13	7.7	7.7	3.7
CFSM	1.80	1.85	1.15	1.68	.89	2.19	2.22	1.36	1.18	1.70	.94	.55
IN.	2.07	2.07	1.33	1.93	.96	2.53	2.48	1.57	1.31	1.96	1.08	.61

CAL YR 1979 TOTAL 21287.9 MEAN 58.3 MAX 1190 MIN 6.8 CFSM 1.83 IN 24.82
WTR YR 1980 TOTAL 17072.3 MEAN 46.6 MAX 422 MIN 3.7 CFSM 1.46 IN 19.91

01483700 ST. JONES RIVER AT DOVER, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-72, 1974 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
DEC												
14...	0740	50	120	5.7	1.0	5.0	75	11.8	35	14	9.1	2.9
MAR												
17...	1415	55	103	6.3	15.0	7.5	60	10.9	28	17	7.4	2.2
JUN												
03...	1430	17	149	6.4	31.0	26.6	55	8.5	38	14	10	3.2
SEP												
08...	1315	6.8	130	5.6	27.0	25.4	30	--	37	22	10	2.9

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
DEC											
14...	7.9	40	.6	2.7	21	15	11	.1	18	100	80
MAR											
17...	8.0	37	.7	2.0	11	18	8.4	.1	11	88	64
JUN											
03...	12	39	.8	2.3	24	23	9.4	.1	3.3	104	79
SEP											
08...	10	35	.7	2.8	15	25	8.0	.1	16	91	85

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
DEC											
14...	.14	13.6	.89	.120	.37	1400	980	420	50	0	50
MAR											
17...	.12	13.1	.91	.120	.37	910	770	140	50	10	40
JUN											
03...	.14	4.77	.42	.080	.25	1200	100	1100	60	0	60
SEP											
08...	.12	1.67	.22	.180	.55	1700	790	910	170	40	130

01484000 MURDERKILL RIVER NEAR FELTON, DE

LOCATION.--Lat 38°58'33", long 75°34'03", Kent County, Hydrologic Unit 02040207, on left bank 30 ft (9 m) downstream from northbound lane of bridge on U.S. Highway 13, 400 ft (122 m) downstream from Black Swamp Creek, 1.3 mi (2.1 km) upstream from Killen Pond, 2.2 mi (3.5 km) south of Felton, and 17.6 mi (28.3 km) upstream from mouth.

DRAINAGE AREA.--13.6 mi^2 (35.2 km^2).

PERIOD OF RECORD.--July 1931 to October 1933. Monthly discharge only for July to September 1931, published in WSP 1302. Annual maximum, water years 1952-60, and occasional low-flow measurements, water years 1952-53, 1955-57, 1959-60. June 1960 to current year.

REVISED RECORDS.--WSP 1432: 1932.

GAGE.--Water-stage recorder. Datum of gage is 21.87 ft (6.666 m) National Geodetic Vertical Datum of 1929. July 1931 to October 1933, nonrecording gage at bridge 200 ft (61 m) upstream at datum 2.00 ft (0.610 m) higher. March 1951 to May 1960, nonrecording gage and crest-stage gage at bridge 200 ft (61 m) upstream at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years (water years 1932-33, 1961-80), 19.0 ft^3/s (0.538 m^3/s), 18.97 in/yr (482 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,090 ft^3/s (59.2 m^3/s) Aug. 4, 1967, gage height, 8.83 ft (2.691 m); minimum, 0.80 ft^3/s (0.023 m^3/s) Aug. 28, Sept. 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 4, 1967, is believed to have been the highest since that of 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 130 ft^3/s (3.6 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Mar. 14	0830	*144	4.08	4.78	1.457	May 1	1530	144	4.08	4.78	1.457
Apr. 4	1900	134	3.79	4.67	1.423						

Minimum daily discharge, 2.3 ft^3/s (0.065 m^3/s), Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	16	16	12	13	12	85	115	8.8	7.5	4.3	2.6
2	12	16	15	12	12	12	44	81	8.0	6.8	4.1	2.5
3	38	28	14	12	12	12	33	38	8.2	7.1	4.5	2.4
4	18	26	14	12	12	13	85	27	9.5	7.8	11	2.4
5	15	19	14	13	12	19	80	22	7.8	6.9	5.6	3.8
6	14	18	15	13	12	22	40	19	7.5	6.1	4.6	3.5
7	12	17	24	13	13	17	30	17	12	5.4	4.0	3.0
8	10	16	18	16	13	16	26	17	32	6.3	3.7	2.7
9	12	16	15	15	13	15	44	17	12	6.5	4.0	2.6
10	45	17	15	13	13	14	66	15	10	5.7	3.6	2.9
11	62	30	14	20	13	16	38	14	9.6	5.4	5.9	2.7
12	29	64	14	96	12	14	28	14	8.5	4.8	4.2	2.6
13	38	38	23	41	12	25	24	14	8.0	4.5	3.8	2.4
14	46	35	38	28	12	120	24	14	7.5	4.3	3.6	2.7
15	26	26	22	24	12	55	28	12	7.5	4.2	3.8	2.6
16	21	22	19	21	19	30	22	11	11	4.1	4.3	2.5
17	19	21	19	19	16	25	19	11	9.6	4.1	3.7	2.6
18	18	19	16	26	13	42	18	17	8.1	4.1	3.6	5.5
19	17	18	15	77	13	30	17	15	7.4	4.0	7.8	3.6
20	16	17	15	37	13	23	16	13	6.9	3.7	6.3	2.9
21	16	17	15	26	14	40	16	16	6.2	3.5	3.9	2.7
22	16	16	14	25	17	56	14	14	6.0	5.2	3.6	2.8
23	16	16	14	46	16	31	14	12	6.0	15	3.4	2.6
24	22	16	14	29	15	25	14	13	5.7	7.0	3.1	2.5
25	20	15	22	23	16	96	17	47	5.6	4.8	2.9	12
26	18	31	19	21	17	56	15	19	37	4.2	2.8	7.4
27	17	44	16	19	14	33	29	13	27	3.9	2.7	3.7
28	17	26	14	18	14	26	66	11	11	3.8	2.6	3.1
29	17	21	14	17	13	78	98	9.8	9.0	14	2.7	2.9
30	16	18	13	16	---	88	54	9.2	8.8	8.0	2.6	2.8
31	16	---	13	15	---	65	---	9.2	---	4.8	2.3	---
TOTAL	672	699	523	775	396	1126	1104	676.2	322.2	183.5	129.0	101.0
MEAN	21.7	23.3	16.9	25.0	13.7	36.3	36.8	21.8	10.7	5.92	4.16	3.37
MAX	62	64	38	96	19	120	98	115	37	15	11	12
MIN	10	15	13	12	12	12	14	9.2	5.6	3.5	2.3	2.4
CFSM	1.60	1.71	1.24	1.84	1.01	2.67	2.71	1.60	.79	.44	.31	.25
IN.	1.84	1.91	1.43	2.12	1.08	3.08	3.02	1.85	.88	.50	.35	.28

CAL YR 1979 TOTAL 10075.2 MEAN 27.6 MAX 654 MIN 4.9 CFSM 2.03 IN 27.56
WTR YR 1980 TOTAL 6706.9 MEAN 18.3 MAX 120 MIN 2.3 CFSM 1.35 IN 18.34

01484100 BEAVERDAM BRANCH AT HOUSTON, DE

LOCATION.--Lat 38°54'20", long 75°30'49", Kent County, Hydrologic Unit 02040207, on left bank 15 ft (5 m) upstream from bridge on State Highway 384, 0.8 mi (1.3 km) south of Houston, and 1.2 mi (1.9 km) upstream from Blairs Pond and mouth.

DRAINAGE AREA.--2.83 mi² (7.33 km²).

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder and timber control; concrete control since Nov. 8, 1979. Datum of gage is 35.67 ft (10.872 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period Oct. 1 to Nov. 8, which are fair. Diversion for irrigation of about 150 acres (60.7 hm²) above station during some years. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 3.82 ft³/s (0.108 m³/s), 18.33 in/yr (466 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176 ft³/s (4.98 m³/s) Sept. 12, 1960, gage height, 5.55 ft (1.692 m); no flow July 28, 1977 (result of pumpage for irrigation).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30 ft³/s (0.84 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	(m³/s)	Gage height (ft)	(m)	Date	Time	Discharge (ft³/s)	(m³/s)	Gage height (ft)	(m)
Apr. 29	0345	*38	1.08	3.19	0.972	May 1	1230	34	0.96	3.14	0.957

Minimum daily discharge, 0.55 ft³/s (0.016 m³/s) Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	4.0	4.4	3.3	4.4	3.2	13	24	3.2	2.5	1.6	.73
2	3.9	4.1	4.2	3.3	4.2	3.3	9.3	15	3.1	2.5	1.6	.73
3	3.9	6.9	4.1	3.3	4.1	3.3	8.2	10	3.1	2.7	1.5	.66
4	3.6	5.5	4.1	3.3	4.1	3.3	16	8.6	3.1	2.7	1.9	.88
5	3.5	4.5	4.1	3.4	4.1	4.2	11	7.7	3.0	2.5	1.7	1.0
6	3.4	4.3	4.3	3.3	4.1	4.1	8.5	7.1	3.0	2.4	1.6	.81
7	3.3	4.2	4.8	3.4	4.1	3.8	7.6	6.5	3.3	2.2	1.6	.69
8	3.1	4.1	4.1	3.6	3.8	3.8	7.3	6.4	4.0	2.4	1.5	.59
9	3.2	4.1	3.8	3.5	3.9	3.6	12	6.2	3.0	2.3	1.4	.55
10	7.5	4.1	3.8	3.3	4.0	3.5	14	5.8	3.0	2.2	1.4	.80
11	8.5	6.9	3.8	4.8	3.8	4.0	9.2	5.5	2.9	2.2	1.5	.70
12	5.1	13	3.8	12	3.7	3.5	8.0	5.4	2.8	2.1	1.5	.79
13	5.8	8.2	5.4	5.8	3.5	6.6	7.4	5.4	2.8	2.0	1.3	.79
14	5.8	7.8	6.2	5.3	3.5	15	7.7	5.1	2.7	1.9	1.1	.80
15	4.6	6.3	4.7	5.0	3.5	6.7	8.2	4.7	2.7	1.6	.90	.78
16	4.5	5.5	4.5	4.7	4.3	5.7	7.1	4.3	2.9	1.4	1.2	.78
17	4.3	5.3	4.2	4.7	3.8	5.7	6.5	4.2	2.8	1.5	1.2	.78
18	4.2	5.0	4.1	6.0	3.5	14	6.4	5.3	2.7	1.5	1.2	.95
19	4.1	4.8	4.1	11	3.5	7.6	6.3	4.8	2.6	1.6	1.4	.86
20	4.1	4.7	4.0	6.5	3.5	6.7	6.0	4.7	2.5	1.6	1.6	.80
21	4.0	4.5	3.8	5.7	3.3	10	5.9	5.0	2.4	1.0	1.4	.79
22	3.9	4.4	3.8	6.1	3.7	8.9	5.6	4.5	2.3	1.5	1.4	.82
23	3.9	4.4	3.8	8.9	3.5	7.1	5.6	4.2	2.2	2.9	1.4	.80
24	4.5	4.2	3.8	6.5	3.4	6.7	5.6	4.1	2.2	2.2	1.3	.82
25	4.3	4.1	4.3	5.9	3.8	14	6.3	4.0	2.1	1.9	1.3	1.4
26	4.2	6.3	3.9	5.4	3.7	8.4	5.6	3.7	5.0	1.9	1.2	1.2
27	4.1	6.6	3.5	5.3	3.4	7.2	6.5	3.4	4.4	1.8	1.1	.95
28	4.1	5.2	3.5	5.1	3.4	6.8	14	3.4	2.9	1.8	.89	.91
29	4.1	4.8	3.5	5.0	3.3	16	21	3.4	2.8	2.1	.75	.88
30	4.0	4.5	3.5	4.7	---	12	13	3.3	2.9	1.9	.67	.89
31	3.9	---	3.3	4.7	---	15	---	3.3	---	1.8	.64	---
TOTAL	135.1	162.3	127.2	162.8	108.9	223.7	268.8	189.0	88.4	62.6	40.75	24.93
MEAN	4.36	5.41	4.10	5.25	3.76	7.22	8.96	6.10	2.95	2.02	1.31	.83
MAX	8.5	13	6.2	12	4.4	16	21	24	5.0	2.9	1.9	1.4
MIN	3.1	4.0	3.3	3.3	3.3	3.2	5.6	3.3	2.1	1.0	.64	.55
CFSM	1.54	1.91	1.45	1.86	1.33	2.55	3.17	2.16	1.04	.71	.46	.29
IN.	1.78	2.13	1.67	2.14	1.43	2.94	3.53	2.48	1.16	.82	.54	.33

CAL YR 1979 TOTAL 2329.60 MEAN 6.38 MAX 85 MIN 2.0 CFSM 2.25 IN 30.61
WTR YR 1980 TOTAL 1594.48 MEAN 4.36 MAX 24 MIN .55 CFSM 1.54 IN 20.95

01484270 BEAVERDAM CREEK NEAR MILTON, DE

LOCATION.--Lat 38°45'41", long 75°16'03", Sussex County, Hydrologic Unit 02040207, on left bank, 15 ft (5 m) upstream from culvert on state road (maintenance No. 88), 2.3 mi (3.7 km) east of Milton, and 3.2 mi (5.1 km) upstream from mouth.

DRAINAGE AREA.--6.10 mi² (15.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1955-71, and annual maximums, water years 1966-71. May 1971 to September 1980 (discontinued).

GAGE.--Water-stage recorder and artificial control. Datum of gage is 0.91 ft (0.28 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 14, 1966, nonrecording gage at same site at different datum. Jan. 14, 1966, to April 1971 nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--Water-discharge records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years, 12.3 ft³/s (0.348 m³/s), 27.38 in/yr (695 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63 ft³/s (1.78 m³/s) Feb. 26, 1979, gage height, 4.84 ft (1.475 m); minimum, 3.9 ft³/s (0.11 m³/s) Nov. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 26 ft³/s (0.74 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 10	2015	28	0.79	4.00	1.219	Mar. 29	1600	29	0.82	4.03	1.228
Nov. 12	1100	35	0.99	4.20	1.280	Apr. 9	1000	29	0.82	4.04	1.231
Dec. 13	1630	32	0.91	4.12	1.256	Apr. 29	Unknown	Unknown		Unknown	
Jan. 12	0015	28	0.79	4.01	1.222	May 21	0800	35	0.99	4.23	1.289
Mar. 13	2015	*47	1.33	4.48	1.366	June 8	0045	47	1.33	4.48	1.366
Mar. 25	0330	31	0.88	4.08	1.244	June 26	1530	30	0.85	4.09	1.247

Minimum daily discharge, 7.4 ft³/s (0.21 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	14	11	15	12	23	27	16	14	9.7	7.9
2	11	12	14	11	15	12	21	27	15	14	9.3	7.7
3	13	15	13	11	15	13	20	24	15	14	9.5	7.6
4	11	18	13	11	15	13	23	22	17	14	9.9	7.6
5	11	13	13	13	15	14	24	21	16	13	9.7	7.9
6	11	12	14	12	14	14	23	20	16	13	9.8	8.6
7	10	12	15	12	14	12	21	19	17	12	9.4	8.5
8	9.9	12	14	14	14	12	20	19	36	13	9.3	8.3
9	11	12	13	12	14	12	24	19	21	13	9.0	8.1
10	16	12	13	11	15	12	24	18	17	13	9.0	7.9
11	19	14	13	14	14	11	22	17	15	12	9.6	7.9
12	14	30	13	20	14	11	20	17	15	12	9.3	7.8
13	13	24	18	15	14	18	20	17	14	11	8.8	7.8
14	14	20	18	14	14	24	21	17	14	11	9.0	7.9
15	13	17	14	13	14	17	20	17	14	11	9.1	7.7
16	12	16	13	13	14	14	20	17	14	11	11	7.5
17	12	15	13	13	14	14	19	17	14	11	9.3	7.6
18	12	15	13	15	13	21	19	18	14	14	8.6	11
19	12	15	13	20	13	17	19	19	14	11	16	8.8
20	12	14	13	15	13	15	19	18	13	11	15	8.0
21	12	14	13	14	14	20	18	28	13	11	11	7.7
22	12	14	12	15	14	19	17	25	13	10	10	7.4
23	12	14	12	20	14	17	17	20	12	13	9.7	7.6
24	12	13	12	17	14	16	17	18	13	13	9.3	7.9
25	12	14	13	16	14	24	18	18	12	12	8.9	10
26	12	15	12	15	14	20	17	17	21	11	8.7	11
27	12	16	12	15	13	17	17	16	20	10	8.7	8.9
28	12	15	12	15	13	17	21	15	15	10	8.5	8.1
29	12	15	11	15	13	26	28	15	15	10	8.3	7.7
30	11	14	11	15	---	24	25	15	15	10	8.1	7.6
31	11	---	11	15	---	25	---	15	---	10	8.1	---
TOTAL	377.9	454	408	442	406	513	617	592	477	368	299.6	246.0
MEAN	12.2	15.1	13.2	14.3	14.0	16.5	20.6	19.1	15.9	11.9	9.66	8.20
MAX	19	30	18	20	15	26	28	28	36	14	16	11
MIN	9.9	12	11	11	13	11	17	15	12	10	8.1	7.4
CFSM	2.00	2.48	2.16	2.34	2.30	2.71	3.38	3.13	2.61	1.95	1.58	1.34
IN.	2.30	2.77	2.49	2.70	2.48	3.13	3.76	3.61	2.91	2.24	1.83	1.50

CAL YR 1979 TOTAL 5771.5 MEAN 15.8 MAX 58 MIN 6.2 CFSM 2.59 IN 35.19
WTR YR 1980 TOTAL 5200.5 MEAN 14.2 MAX 36 MIN 7.4 CFSM 2.33 IN 31.71

01484270 BEAVERDAM CREEK NEAR MILTON, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
DEC 19...	1015	12	174	5.8	.0	4.5	7	9.3	26	4	6.1	2.6
MAR 11...	1320	12	152	5.2	7.5	13.0	5	8.8	23	20	5.3	2.4
SEP 12...	1200	7.8	180	5.7	25.0	17.5	3	5.0	26	23	6.0	2.7

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
DEC 19...	14	60	1.2	3.9	22	14	16	.0	17	104	87
MAR 11...	14	53	1.3	3.2	3	13	17	.1	16	88	73
SEP 12...	14	49	1.2	4.4	3	18	18	.0	20	116	85

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
DEC 19...	.14	3.37	4.4	.230	.71	240	160	80	20	0	20
MAR 11...	.12	2.85	3.0	.170	.52	260	190	70	20	0	20
SEP 12...	.16	2.44	5.4	.070	.21	240	120	120	30	10	20

01484500 STOCKLEY BRANCH AT STOCKLEY, DE

LOCATION.--Lat 38°38'19", long 75°20'31", Sussex County, Hydrologic Unit 02060010, on left bank at highway bridge in Stockley, 1.6 mi (2.6 km) upstream from mouth, and 4.4 mi (7.1 km) southeast of Georgetown.

DRAINAGE AREA.--5.24 mi² (13.57 km²).

PERIOD OF RECORD.--April 1943 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 24.54 ft (7.480 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 16, 1950, nonrecording gage at same site and datum.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 7.04 ft³/s (0.199 m³/s), 18.24 in/yr (463 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 217 ft³/s (6.15 m³/s) Feb. 26, 1979, gage height, 5.01 ft (1.53 m); minimum observed, 0.13 ft³/s (0.004 m³/s) Sept. 1-11, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 45 ft³/s (1.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar. 14	0030	56	1.59	3.06	0.933	Apr. 28	0530	45	1.27	3.03	0.924
Mar. 25	0745	47	1.33	2.99	0.911	Apr. 29	0315	45	1.27	3.03	0.924
Mar. 29	1930	47	1.33	3.01	0.917	May 1	1800	54	1.53	3.16	0.963
Apr. 4	2200	*67	1.90	3.29	1.003						

Minimum discharge, 1.1 ft³/s (0.031 m³/s) Sept. 12, 21, 22, 23, gage height, 1.80 ft (0.549 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.5	6.9	5.4	7.7	5.5	26	40	6.6	3.4	1.6	1.4
2	3.4	3.5	6.7	5.4	7.3	5.7	19	33	6.4	3.3	1.6	1.4
3	3.8	7.8	6.4	5.3	7.0	5.7	16	20	6.2	3.3	1.6	1.3
4	3.3	5.5	6.6	5.3	6.8	5.6	31	17	5.9	3.3	1.6	1.3
5	3.2	4.6	6.3	6.5	6.8	6.6	39	15	5.6	3.2	1.6	1.4
6	3.2	4.5	6.7	5.8	6.7	6.9	21	14	5.6	2.8	1.5	1.4
7	3.0	4.5	7.4	5.9	6.7	6.3	16	13	9.9	2.5	1.5	1.5
8	2.9	4.4	6.6	6.5	6.5	6.5	15	12	15	2.7	1.5	1.4
9	3.2	4.3	6.0	6.0	6.4	6.2	23	12	7.8	2.7	1.4	1.3
10	7.3	4.6	5.9	5.7	6.6	5.9	22	11	7.0	2.3	1.4	1.3
11	5.9	20	6.0	7.2	6.3	6.0	17	10	6.4	2.2	1.4	1.3
12	4.9	25	6.0	17	6.3	5.5	15	10	6.0	2.2	1.5	1.2
13	5.6	14	8.1	10	6.0	12	14	9.1	5.9	2.1	1.4	1.2
14	5.4	13	9.3	9.4	6.0	28	14	8.8	5.4	2.1	1.4	1.2
15	4.9	11	7.8	8.9	6.0	14	16	8.0	5.0	2.1	1.4	1.2
16	4.7	10	7.5	8.2	6.9	11	14	7.7	5.3	2.0	1.9	1.2
17	4.5	9.6	7.2	7.9	6.5	10	12	7.5	5.0	2.2	1.5	1.2
18	4.4	9.2	6.6	9.7	6.0	22	11	8.0	4.7	2.4	1.4	1.5
19	4.4	8.7	6.6	22	5.8	16	11	8.0	4.0	2.1	2.1	1.3
20	4.4	8.5	6.6	14	5.9	13	9.8	7.9	4.2	2.0	1.8	1.2
21	4.1	8.2	6.3	12	6.0	23	9.5	15	4.3	2.0	1.6	1.2
22	4.0	8.0	6.3	12	6.1	20	9.3	12	3.4	1.9	1.5	1.2
23	4.0	7.9	6.3	23	6.1	15	9.0	9.6	3.2	2.6	1.8	1.3
24	4.0	7.8	6.3	17	6.0	13	8.7	10	3.4	2.4	1.8	1.2
25	4.0	7.5	7.3	14	6.8	34	10	16	4.2	2.1	1.5	2.9
26	3.9	8.6	6.7	12	6.8	21	9.2	10	6.9	2.0	1.5	2.7
27	3.7	8.7	6.2	11	6.3	16	9.3	8.4	4.7	2.1	1.4	1.5
28	3.8	8.2	6.0	10	6.1	14	31	7.6	3.4	1.9	1.3	1.3
29	3.9	7.8	5.8	9.4	5.8	35	34	7.3	3.5	2.0	1.3	1.3
30	3.6	7.3	5.7	8.4	---	31	20	7.0	3.7	1.7	1.4	1.3
31	3.5	---	5.7	8.2	---	27	---	6.8	---	1.6	1.4	---
TOTAL	128.4	256.2	205.8	309.1	186.2	447.4	511.8	381.7	168.6	73.2	47.6	42.1
MEAN	4.14	8.54	6.64	9.97	6.42	14.4	17.1	12.3	5.62	2.36	1.54	1.40
MAX	7.3	25	9.3	23	7.7	35	39	40	15	3.4	2.1	2.9
MIN	2.9	3.5	5.7	5.3	5.8	5.5	8.7	6.8	3.2	1.6	1.3	1.2
CFSM	.79	1.63	1.27	1.90	1.23	2.75	3.26	2.35	1.07	.45	.29	.27
IN.	.91	1.82	1.46	2.19	1.32	3.18	3.63	2.71	1.20	.52	.34	.30

CAL YR 1979 TOTAL 3701.9 MEAN 10.1 MAX 174 MIN 2.3 CFSM 1.93 IN 26.28
WTR YR 1980 TOTAL 2758.1 MEAN 7.54 MAX 40 MIN 1.2 CFSM 1.44 IN 19.58

01485000 POCOMOKE RIVER NEAR WILLARDS, MD

LOCATION.--Lat 38°23'20", long 75°19'30", Worcester County, Hydrologic Unit 02060009, on left bank 30 ft (9 m) downstream from bridge on State Highway 346, 0.6 mi (1.0 km) upstream from Burnt Mill Branch, 1.3 mi (2.1 km) east of Willards, 1.3 mi (2.1 km) west of Whaleysville, and 50.3 mi (80.9 km) upstream from mouth.

DRAINAGE AREA.--60.5 mi² (156.7 km²).

PERIOD OF RECORD.--December 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 13.95 ft (4.252 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years (water years 1951-80), 72.9 ft³/s (2.065 m³/s), 16.36 in/yr (416 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,870 ft³/s (53.0 m³/s) Feb. 26, 1979, gage height, 13.88 ft (4.231 m); minimum, 2.2 ft³/s (0.062 m³/s) Aug. 18, 19, 1957, gage height, 1.91 ft (0.582 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 12	2000	*1190	33.7	11.48	3.499
Mar. 21	1930	524	14.8	8.98	2.737
Apr. 29	0600	677	19.2	9.79	2.984

Minimum daily discharge, 4.0 ft³/s (0.11 m³/s) Sept. 15, 16, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	41	85	55	68	51	257	387	37	29	11	5.1
2	147	41	80	55	60	48	189	375	35	27	10	4.9
3	258	129	73	57	55	46	153	251	34	26	10	4.8
4	249	211	65	57	52	47	164	192	34	25	11	4.7
5	179	146	63	68	49	58	189	148	32	25	9.6	4.8
6	164	117	64	84	47	86	137	127	31	23	9.2	5.0
7	130	104	82	85	47	78	110	111	31	22	8.9	4.6
8	103	92	86	94	45	70	95	99	163	21	8.5	4.3
9	92	85	68	93	44	63	139	85	78	21	8.2	4.2
10	162	79	67	77	46	56	180	73	58	20	7.8	4.6
11	321	405	67	75	43	53	132	66	53	20	10	4.7
12	222	1090	66	199	43	49	104	61	47	19	8.7	4.3
13	179	1030	69	146	41	66	86	57	43	18	8.0	4.2
14	164	692	132	119	41	330	79	54	40	17	7.4	4.1
15	132	424	121	116	42	197	85	51	37	17	7.4	4.0
16	112	280	106	101	47	142	73	48	36	16	14	4.0
17	98	207	97	89	54	115	63	46	34	16	9.4	4.1
18	86	170	80	93	49	221	58	45	32	15	8.0	4.2
19	77	143	74	344	47	208	54	45	31	14	7.9	4.1
20	72	124	73	223	48	159	50	44	30	14	7.8	4.1
21	68	111	70	179	49	295	48	65	29	13	7.3	4.1
22	66	101	69	149	51	367	45	76	28	13	7.2	4.1
23	63	93	68	299	53	226	43	63	27	16	7.0	4.0
24	61	86	69	249	55	179	41	57	26	17	6.8	4.2
25	56	81	80	185	63	281	46	61	25	14	6.2	4.4
26	53	98	96	155	86	239	45	54	39	13	6.0	4.7
27	50	135	86	128	73	182	45	48	48	12	5.8	4.1
28	48	115	72	110	66	147	453	44	38	12	5.7	4.1
29	47	104	70	96	59	315	630	41	34	12	5.5	4.2
30	45	90	69	84	---	374	413	39	32	11	5.4	4.1
31	43	---	57	76	---	281	---	38	---	11	5.2	---
TOTAL	3667	6624	2424	3940	1523	5029	4206	2951	1242	549	250.9	130.8
MEAN	118	221	78.2	127	52.5	162	140	95.2	41.4	17.7	8.09	4.36
MAX	321	1090	132	344	86	374	630	387	163	29	14	5.1
MIN	43	41	57	55	41	46	41	38	25	11	5.2	4.0
CFSM	1.95	3.65	1.29	2.10	.87	2.68	2.31	1.57	.68	.29	.13	.07
IN.	2.25	4.07	1.49	2.42	.94	3.09	2.59	1.81	.76	.34	.15	.08

CAL YR 1979 TOTAL 56691.0 MEAN 155 MAX 1740 MIN 27 CFSM 2.56 IN 34.86

WTR YR 1980 TOTAL 32536.7 MEAN 88.9 MAX 1090 MIN 4.0 CFSM 1.47 IN 20.01

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD

LOCATION.--Lat 38°13'44", long 75°28'19", Worcester County, Hydrologic Unit 02060009, on right bank 15 ft (5 m) downstream from bridge on State Highway 12, 0.5 mi (0.8 km) upstream from Furnace Branch, 0.6 mi (1.0 km) downstream from Millville Creek, 5.5 mi (8.8 km) northwest of Snow Hill, and 7.3 mi (11.7 km) upstream from mouth.

DRAINAGE AREA.--44.9 mi^2 (116.3 km^2).

PERIOD OF RECORD.--December 1949 to current year.

REVISED RECORDS.--WSP 1332: 1953.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 12.29 ft (3.746 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--30 years (water years 1951-80), 55.4 ft^3/s (1.569 m^3/s), 16.76 in/yr (426 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,940 ft^3/s (54.9 m^3/s) Feb. 26, 1979, gage height, 7.95 ft (2.423 m); minimum discharge, 0.80 ft^3/s (0.023 m^3/s) Sept. 8, 9, 10, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 280 ft^3/s (7.9 m^3/s) and maximum(*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 12	2100	*1210	34.3	7.30	2.225	Mar. 22	1900	372	10.5	5.74	1.750
Jan. 24	1300	297	8.41	5.42	1.652	Mar. 30	1900	332	9.40	5.59	1.704
Mar. 15	1000	288	8.16	5.36	1.634	Apr. 29	1700	640	18.1	6.44	1.963

Minimum discharge, 1.2 ft^3/s (0.034 m^3/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	25	56	28	44	36	225	380	17	10	3.0	1.9
2	169	25	45	27	39	30	171	301	15	7.4	3.7	1.8
3	203	69	38	26	34	30	127	234	14	6.3	3.0	1.8
4	256	152	34	26	32	31	128	161	20	6.2	3.5	1.6
5	225	228	32	35	31	47	223	116	19	5.8	3.2	1.6
6	157	158	32	41	30	78	187	87	16	5.0	3.1	1.7
7	116	111	53	45	31	85	130	64	16	4.1	2.7	2.0
8	91	86	61	61	31	77	92	50	18	3.9	2.5	1.8
9	73	68	63	70	33	60	89	42	22	4.5	2.4	1.6
10	82	57	53	65	33	47	139	37	19	4.1	2.6	1.7
11	143	147	44	56	33	40	147	33	16	3.7	2.7	1.8
12	215	904	37	79	36	35	116	31	13	3.5	2.5	1.7
13	172	983	38	111	34	52	82	28	11	3.1	2.6	1.6
14	128	553	57	119	34	193	69	26	9.5	2.8	2.4	1.5
15	103	321	68	100	33	278	73	23	9.1	2.7	3.1	1.4
16	86	218	69	80	42	205	65	21	10	2.6	17	1.4
17	70	159	59	65	53	126	53	19	9.4	2.8	14	1.4
18	55	125	46	65	48	118	42	19	7.9	3.5	6.8	1.4
19	46	103	39	166	46	162	34	22	7.2	3.3	5.2	1.4
20	39	85	37	267	45	170	30	35	6.7	2.9	5.0	1.4
21	35	70	35	209	44	179	28	76	6.1	2.7	3.9	1.4
22	32	59	34	140	49	333	26	104	5.4	2.5	3.5	1.4
23	30	51	33	196	51	308	24	96	5.0	8.2	3.3	1.3
24	31	46	32	287	47	195	23	64	4.7	14	3.0	1.4
25	31	41	38	235	51	157	37	42	4.5	9.0	2.7	1.7
26	30	55	43	161	63	163	40	38	20	5.4	2.3	1.9
27	29	80	44	121	63	147	40	35	29	3.9	2.2	2.0
28	28	96	41	99	56	110	203	30	18	3.2	2.1	1.9
29	27	95	35	81	46	157	579	25	11	3.6	2.0	1.8
30	27	74	32	66	---	300	495	21	14	3.3	1.9	1.8
31	26	---	30	53	---	294	---	19	---	2.9	1.9	---
TOTAL	2871	5244	1358	3180	1212	4243	3717	2279	393.5	146.9	119.8	49.1
MEAN	92.6	175	43.8	103	41.8	137	124	73.5	13.1	4.74	3.86	1.64
MAX	256	983	69	287	63	333	579	380	29	14	17	2.0
MIN	26	25	30	26	30	30	23	19	4.5	2.5	1.9	1.3
CFSM	2.06	3.90	.98	2.29	.93	3.05	2.76	1.64	.29	.11	.09	.04
IN.	2.38	4.34	1.13	2.63	1.00	3.52	3.08	1.89	.33	.12	.10	.04

CAL YR 1979 TOTAL 49411.0 MEAN 135 MAX 1850 MIN 12 CFSM 3.01 IN 40.94
WTR YR 1980 TOTAL 24813.3 MEAN 67.8 MAX 983 MIN 1.3 CFSM 1.51 IN 20.56

01486000 MANOKIN BRANCH NEAR PRINCESS ANNE, MD

LOCATION.--Lat 38°12'50", long 75°40'18", Somerset County, Hydrologic Unit 02060009, on right bank 45 ft (14 m) downstream from farm bridge, 1.4 mi (2.3 km) northeast of Princess Anne, and 1.6 mi (2.6 km) upstream from confluence with Loretto Branch.

DRAINAGE AREA.--4.80 mi² (12.43 km²).

PERIOD OF RECORD.--April 1951 to September 1971, October 1974 to current year.

REVISED RECORDS.--WDR MD-DE-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.03 ft (2.143 m) National Geodetic Vertical Datum of 1929. Artificial control since April 30, 1975. Nov. 26, 1968, to Sept. 30, 1971, water-stage recorder above and nonrecording gage below gage height 1.4 ft (0.43 m). Prior to Nov. 26, 1968, recording gage at datum 1.0 ft (0.30 m) higher.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--26 years (water years 1952-71, 1975-80), 4.70 ft³/s (0.133 m³/s), 13.30 in/yr (338 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 547 ft³/s (15.5 m³/s) Aug. 20, 1969, gage height, 5.44 ft (1.658 m), from rating curve extended above 27 ft³/s (0.76 m³/s) on basis of channel-conveyance study; no flow at times in 1954, 1963, 1964, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.4 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 3	0845	97	2.75	3.49	1.064	Mar. 29	1400	53	1.50	3.13	0.954
Oct. 10	1645	54	1.53	3.14	0.957	Apr. 4	0900	51	1.44	3.11	0.948
Nov. 3	1145	62	1.76	3.21	0.978	Apr. 4	1900	69	1.95	3.27	0.997
Nov. 11	2000	167	4.73	3.98	1.213	Apr. 28	0330	*201	5.69	4.24	1.292
Jan. 19	0030	76	2.15	3.33	1.015	Apr. 28	2145	106	3.00	3.56	1.085
Mar. 13	2230	58	1.64	3.17	0.966	Apr. 30	1715	78	2.21	3.34	1.018
Mar. 21	1130	74	2.10	3.31	1.009						

Minimum daily discharge, 0.15 ft³/s (0.004 m³/s) Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	3.1	5.3	3.2	5.0	3.6	15	46	2.2	.70	.34	.26
2	13	3.2	5.0	3.1	4.3	3.6	12	27	2.0	.67	.34	.25
3	49	31	4.8	3.0	3.8	3.6	10	17	1.9	.69	.39	.24
4	25	22	4.7	3.0	3.6	4.1	40	12	1.7	.69	1.2	.23
5	16	14	4.4	4.6	3.4	6.8	31	8.4	1.5	.65	.47	.24
6	14	11	5.1	4.6	3.3	8.8	17	6.4	1.5	.60	.38	.25
7	10	9.1	9.7	5.0	3.3	6.6	12	5.2	1.5	.54	.34	.25
8	7.8	7.5	7.5	7.4	3.3	5.9	9.5	4.6	1.6	.60	.31	.22
9	8.3	6.6	6.1	6.2	3.4	5.3	18	4.1	1.4	.61	.32	.20
10	26	6.7	5.7	5.4	3.6	4.8	17	3.6	1.4	.57	.42	.20
11	25	97	5.3	8.9	3.4	4.1	11	3.3	1.3	.54	.63	.21
12	16	89	5.0	21	3.5	3.6	9.2	3.2	1.3	.51	.43	.19
13	12	46	5.8	12	3.2	13	7.5	3.1	1.3	.48	.34	.19
14	11	30	8.6	9.8	3.0	28	7.8	2.8	1.2	.45	.32	.18
15	9.0	20	6.6	9.6	3.3	14	9.0	2.6	1.2	.44	.53	.18
16	7.6	16	6.0	7.9	4.7	9.7	6.6	2.5	1.2	.43	6.6	.17
17	6.2	13	5.6	6.6	5.8	8.4	5.3	2.4	1.1	.44	1.7	.17
18	5.1	11	5.0	14	4.4	14	4.9	2.5	1.1	.49	.94	.17
19	4.6	9.1	4.7	41	3.9	11	4.4	2.6	1.0	.41	.80	.17
20	4.3	8.1	4.4	20	4.1	9.2	4.0	3.8	.98	.39	.75	.17
21	4.0	7.3	4.4	14	4.3	36	3.7	14	.89	.36	.65	.17
22	3.7	6.7	4.4	14	4.8	23	3.4	9.4	.87	.35	.60	.16
23	3.6	6.1	4.1	44	5.2	15	3.3	6.2	.85	.87	.57	.16
24	4.7	5.8	4.1	23	4.8	11	3.2	5.0	.83	.69	.53	.15
25	4.4	5.6	6.0	16	6.0	17	8.4	4.4	.80	.47	.49	.18
26	4.1	9.5	5.7	12	7.4	12	5.9	3.6	1.0	.40	.46	.19
27	3.8	10	4.9	9.7	5.6	8.8	5.8	3.0	.88	.38	.40	.16
28	3.6	8.0	4.4	8.3	5.0	7.9	118	2.7	.80	.37	.37	.16
29	3.5	6.7	4.1	7.1	4.4	38	61	2.5	.76	.43	.34	.18
30	3.3	5.8	3.7	6.1	---	25	45	2.4	.79	.39	.33	.16
31	3.2	---	3.3	5.6	---	21	---	2.3	---	.35	.31	---
TOTAL	325.8	524.9	164.4	356.1	123.8	382.8	508.9	218.6	36.85	15.96	22.60	5.81
MEAN	10.5	17.5	5.30	11.5	4.27	12.3	17.0	7.05	1.23	.51	.73	.19
MAX	49	97	9.7	44	7.4	38	118	46	2.2	.87	6.6	.26
MIN	3.2	3.1	3.3	3.0	3.0	3.6	3.2	2.3	.76	.35	.31	.15
CFSM	2.19	3.65	1.10	2.40	.89	2.56	3.54	1.47	.26	.11	.15	.04
IN.	2.52	4.07	1.27	2.76	.96	2.97	3.94	1.69	.29	.12	.18	.05

CAL YR 1979 TOTAL 4525.43 MEAN 12.4 MAX 174 MIN .87 CFSM 2.58 IN 35.06
WTR YR 1980 TOTAL 2686.52 MEAN 7.34 MAX 118 MIN .15 CFSM 1.53 IN 20.82

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE

LOCATION.--Lat 38°43'42", long 75°33'44", Sussex County, Hydrologic Unit 02060008, on left bank at downstream side of highway bridge, 800 ft (244 m) downstream from Gum Branch, 2.5 mi (4.0 km) southeast of Bridgeville, and 50.5 mi (81.3 km) upstream from mouth.

DRAINAGE AREA.--75.4 mi² (195.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1943 to current year. Prior to October 1955, published as Gravelly Fork near Bridgeville.

REVISED RECORDS.--WSP 1111: 1947. WSP 1232: 1945-49.

GAGE.--Water-stage recorder. Datum of gage is 13.64 ft (4.157 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service). Prior to Apr. 19, 1947, nonrecording gage, and Apr. 19, 1947, to Dec. 18, 1969, recording gage at present site and datum. Timber control Sept. 3, 1947, to Dec. 18, 1969. Feb. 18, 1970, to Oct. 1, 1973, recording gage at site 300 ft (91 m) downstream at same datum.

REMARKS.--Water-discharge records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 93.3 ft³/s (2.642 m³/s), 16.80 in/yr (427 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,020 ft³/s (85.5 m³/s) Feb. 26, 1979, gage height, 10.31 ft (3.142 m); minimum observed, 6.3 ft³/s (0.18 m³/s) Sept. 29, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 11.0 ft (3.35 m) in September 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 365 ft³/s (10.3 m³/s) Apr. 10, gage height, 6.55 ft (1.996 m), no other peak above base of 360 ft³/s (10 m³/s); minimum daily, 34 ft³/s (0.96 m³/s) Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	106	118	84	118	90	273	300	101	65	41	36
2	109	105	114	83	114	92	216	300	100	61	40	37
3	146	116	109	82	112	91	195	233	98	58	38	35
4	149	129	108	87	110	89	222	206	96	59	63	34
5	117	118	106	84	109	94	238	186	93	60	53	40
6	117	113	106	82	108	102	195	174	89	59	49	42
7	108	111	112	82	108	98	177	163	94	54	44	45
8	100	109	107	81	105	99	167	154	125	53	42	40
9	99	107	100	80	104	99	209	150	110	53	40	38
10	139	106	98	79	105	95	323	145	98	51	38	39
11	271	125	97	85	102	99	240	140	94	49	41	39
12	202	272	95	193	101	95	207	136	88	44	40	38
13	179	217	102	145	97	104	193	137	86	45	38	38
14	190	201	137	128	96	263	187	134	84	43	39	39
15	170	180	118	124	96	169	196	128	83	39	40	37
16	155	164	110	118	103	145	181	122	86	38	42	36
17	147	154	108	113	102	139	164	120	81	40	39	39
18	141	148	100	117	95	221	158	125	76	47	49	51
19	137	142	98	201	93	188	155	127	74	41	48	44
20	134	137	97	159	94	160	151	123	71	40	54	41
21	131	133	94	143	94	196	150	128	68	39	47	40
22	128	130	92	138	96	221	145	123	67	37	45	40
23	127	127	93	174	96	176	143	117	66	57	43	39
24	131	125	92	160	94	160	141	115	63	50	42	39
25	130	122	97	145	97	226	148	154	63	45	42	49
26	124	130	98	137	99	201	140	130	72	42	41	60
27	119	150	92	130	96	173	143	118	95	40	39	46
28	117	138	90	128	96	159	196	112	75	40	37	42
29	115	132	88	124	94	241	311	108	68	50	36	40
30	112	124	86	121	---	272	246	106	70	54	38	40
31	108	---	85	120	---	250	---	104	---	44	37	---
TOTAL	4240	4171	3147	3727	2934	4797	5810	4618	2534	1497	1315	1223
MEAN	137	139	102	120	101	155	194	149	84.5	48.3	42.4	40.8
MAX	271	272	137	201	118	272	323	300	125	65	63	60
MIN	98	105	85	79	93	89	140	104	63	37	36	34
CFSM	1.82	1.84	1.35	1.59	1.34	2.06	2.57	1.98	1.12	.64	.56	.54
IN.	2.09	2.06	1.55	1.84	1.45	2.37	2.87	2.28	1.25	.74	.65	.60

CAL YR 1979 TOTAL 55809 MEAN 153 MAX 2880 MIN 47 CFSM 2.03 IN 27.53
WTR YR 1980 TOTAL 40013 MEAN 109 MAX 323 MIN 34 CFSM 1.45 IN 19.74

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-72, 1974 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
DEC												
19...	1200	98	100	5.3	.5	4.5	9	12.0	21	0	5.3	2.0
MAR												
17...	1150	144	87	6.2	15.0	11.0	20	10.9	14	1	3.7	1.1
JUN												
03...	1220	98	197	6.0	32.5	22.3	7	6.1	22	15	5.2	2.1
SEP												
18...	1145	59	215	6.0	24.0	21.0	5	4.8	22	6	5.2	2.3

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
DEC											
19...	7.0	49	.7	1.9	21	6.1	9.2	.0	19	82	63
MAR											
17...	5.9	45	.7	1.5	13	7.0	8.7	.1	3.2	80	39
JUN											
03...	22	66	2.1	2.0	7	5.4	31	.1	17	118	89
SEP											
18...	31	70	2.8	4.8	16	5.5	48	.0	16	135	123

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
DEC											
19...	.11	21.7	3.7	.020	.06	360	200	160	40	10	30
MAR											
17...	.11	31.1	3.4	.030	.09	570	540	30	60	50	9
JUN											
03...	.16	31.2	2.1	.050	.15	200	120	80	90	10	80
SEP											
18...	.18	21.5	1.9	.100	.55	1200	1100	70	130	0	130

01488500 MARSHYHOPE CREEK NEAR ADAMSVILLE, DE

LOCATION.--Lat 38°50'59", long 75°40'24", Kent County, Hydrologic Unit 02060008, on left bank 45 ft (14 m) upstream from highway bridge, 1.4 mi (2.3 km) upstream from Cattail Branch, 1.6 mi (2.6 km) northeast of Adamsville, 4.9 mi (7.9 km) northwest of Greenwood, and 33 mi (53 km) upstream from mouth.

DRAINAGE AREA.--43.9 mi^2 (113.7 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1943 to March 1969, October 1971 to current year.

REVISED RECORDS.--WSP 1141: 1948(P). WSP 1432: 1946(M), 1948, 1952.

GAGE.--Water-stage recorder. Datum of gage is 26.21 ft (7.989 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 24, 1953, nonrecording gage and crest-stage gage, and Nov. 24, 1953, to March 1969, recording gage at site on old channel about 240 ft (73 m) southeast of present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--34 years (water years 1944-68, 1972-80), 55.6 ft^3/s (1.575 m^3/s), 17.20 in/yr (437 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft^3/s (105 m^3/s) July 13, 1975, gage height, 13.19 ft (4.020 m); maximum gage height, 13.98 ft (4.261 m) Aug. 5, 1967, present datum; minimum discharge, 1.0 ft^3/s (0.028 m^3/s) Sept. 9, 10, 1964, Aug. 20, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 16.5 ft (5.03 m), present datum, in September 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft^3/s (12 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Jan. 12	0745	473	13.4	4.70	1.433
Mar. 14	0130	621	17.6	5.23	1.594
Mar. 25	0630	478	13.5	4.72	1.439
Mar. 29	1800	450	12.7	4.61	1.405
Apr. 4	1400	*689	19.5	5.45	1.661

Minimum daily discharge, 9.9 ft^3/s (0.28 m^3/s) Sept. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	44	60	45	53	39	251	299	32	22	17	11
2	45	44	57	44	50	39	157	201	31	21	16	11
3	139	60	53	42	47	42	126	135	30	22	16	11
4	98	75	52	41	46	43	364	106	30	21	24	11
5	72	60	51	44	44	50	238	88	28	20	19	12
6	64	55	51	41	44	73	149	78	27	19	16	12
7	56	53	63	41	43	60	116	69	32	18	14	12
8	50	50	59	45	41	58	100	63	120	19	14	11
9	50	48	53	46	42	54	147	61	42	19	14	11
10	172	48	51	44	42	49	196	56	33	18	14	11
11	243	81	49	52	40	55	133	53	30	17	14	11
12	135	235	48	300	39	50	106	52	28	17	14	10
13	148	138	66	124	38	100	94	51	27	16	13	10
14	178	136	118	98	38	336	88	48	26	16	13	10
15	114	105	76	90	38	137	96	44	26	15	13	10
16	93	90	69	79	44	102	84	42	26	15	13	10
17	82	80	65	72	44	91	73	40	26	15	12	10
18	75	74	58	70	40	207	69	44	24	15	12	12
19	69	69	55	259	39	124	65	45	23	14	15	11
20	65	62	52	144	39	101	62	43	23	14	15	10
21	61	61	50	108	39	178	60	45	22	14	14	10
22	58	57	49	93	42	189	57	43	22	16	13	9.9
23	56	55	49	168	45	122	56	41	21	33	13	9.9
24	61	54	48	139	44	103	54	40	21	24	13	10
25	61	52	64	99	47	304	57	86	20	17	12	13
26	55	90	63	79	51	164	54	47	40	15	12	13
27	52	115	55	74	46	121	62	40	56	14	12	11
28	51	85	51	69	45	102	128	37	30	14	12	10
29	49	74	49	64	43	315	237	35	25	82	12	10
30	46	66	48	60	---	243	148	34	25	40	12	10
31	44	---	46	58	---	261	---	33	---	22	11	---
TOTAL	2584	2316	1778	2732	1253	3912	3627	2099	946	644	434	323.8
MEAN	83.4	77.2	57.4	88.1	43.2	126	121	67.7	31.5	20.8	14.0	10.8
MAX	243	235	118	300	53	336	364	299	120	82	24	13
MIN	42	44	46	41	38	39	54	33	20	14	11	9.9
CFSM	1.90	1.76	1.31	2.01	.98	2.87	2.76	1.54	.72	.47	.32	.25
IN.	2.19	1.96	1.51	2.31	1.06	3.31	3.07	1.78	.80	.55	.37	.27

CAL YR 1979 TOTAL 35816.0 MEAN 98.1 MAX 2410 MIN 20 CFSM 2.24 IN 30.35
WTR YR 1980 TOTAL 22648.8 MEAN 61.9 MAX 364 MIN 9.9 CFSM 1.41 IN 19.19

01488500 MARSHYHOPE CREEK NEAR ADAMSVILLE, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
DEC												
19...	1330	55	97	5.9	1.0	4.5	25	13.2	36	7	8.7	3.4
MAR												
11...	1020	58	102	5.5	2.5	8.0	5	12.6	21	6	5.6	1.8
JUN												
04...	1245	32	95	5.9	24.0	22.8	6	9.7	26	8	6.9	2.1
SEP												
10...	1330	11	108	6.2	24.0	21.6	0	7.3	34	14	10	2.3

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
DEC											
19...	7.3	40	.5	1.6	29	9.8	9.3	.0	23	84	81
MAR											
11...	8.0	43	.8	1.5	15	10	9.2	.1	21	72	66
JUN											
04...	8.0	39	.7	1.2	18	9.1	9.5	.1	24	88	72
SEP											
10...	5.6	25	.4	1.5	20	9.6	9.8	.1	23	85	74

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
DEC											
19...	.11	12.5	1.5	.030	.09	1100	630	470	110	10	100
MAR											
11...	.10	11.3	1.1	.040	.12	1500	1400	140	90	0	90
JUN											
04...	.12	7.60	1.3	.390	1.2	240	150	90	80	0	80
SEP											
10...	.12	2.52	1.1	.000	.00	1300	1300	40	160	20	140

01489000 FAULKNER BRANCH AT FEDERALSBURG, MD

LOCATION.--Lat 38°42'44", long 75°47'34", Caroline County, Hydrologic Unit 02060008, on right bank 25 ft (8 m) downstream from bridge on Nichols Road, 0.9 mi (1.4 km) upstream from mouth, and 1.6 mi (2.6 km) northwest of Federalsburg.

DRAINAGE AREA.--7.10 mi^2 (18.39 km^2).

PERIOD OF RECORD.--July 1950 to current year.

REVISED RECORDS.--WSP 1552: 1952. WSP 2103: 1960(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 16.70 ft (5.090 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diversion for irrigation of about 100 acres (40.5 hm^2) above station during some years. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years, 9.09 ft^3/s (0.257 m^3/s), 17.39 in/yr (442 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,680 ft^3/s (47.6 m^3/s) July 13, 1975, gage height, 5.98 ft (1.823 m), from rating curve extended above 210 ft^3/s (5.95 m^3/s) on basis of contracted-opening measurement of peak flow; no flow at times during many years (result of pumpage for irrigation).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1935 is believed to have been higher than that of July 13, 1975, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft^3/s (1.6 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 10	1545	126	3.57	2.96	0.902	Mar. 18	0330	67	1.90	2.40	0.732
Jan. 12	0200	63	1.78	2.35	0.716	Mar. 25	0145	78	2.21	2.52	0.768
Jan. 18	2215	79	2.24	2.54	0.774	July 29	0800	*129	3.65	2.98	0.908
Mar. 13	2045	101	2.86	2.77	0.844						

Minimum discharge, 1.2 ft^3/s (0.034 m^3/s) Aug. 27, gage height, 1.15 ft (0.351 m); minimum daily, 1.7 ft^3/s (0.048 m^3/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	11	12	8.8	12	7.2	31	23	6.0	3.5	5.0	2.0
2	18	11	11	8.5	12	7.9	27	17	5.8	3.5	6.4	2.0
3	30	15	11	8.3	12	8.2	23	16	5.8	3.7	4.5	1.9
4	21	13	11	8.4	11	8.8	26	14	5.6	3.5	12	2.0
5	19	12	11	9.0	11	11	23	13	5.3	3.2	6.1	4.7
6	17	12	12	8.4	11	10	20	13	5.5	3.2	5.5	3.6
7	15	11	12	8.8	11	9.8	18	12	5.6	3.0	4.7	2.7
8	13	11	11	9.2	10	10	17	12	5.8	3.2	4.5	2.4
9	16	11	10	8.8	10	9.1	24	11	5.0	3.2	4.2	2.2
10	61	11	10	8.3	10	8.9	27	10	5.1	3.0	3.9	2.3
11	41	26	9.6	17	9.8	9.3	20	10	4.9	2.9	4.5	2.1
12	29	34	9.4	29	9.5	8.3	18	9.9	5.0	2.6	4.2	1.9
13	32	26	18	16	9.1	23	17	9.7	5.8	2.4	3.9	1.8
14	30	25	16	16	9.1	21	17	9.0	5.7	2.2	3.2	1.9
15	24	21	13	14	8.9	15	17	8.4	6.1	2.1	3.1	1.8
16	22	19	13	14	11	14	15	8.1	6.2	2.1	3.1	1.7
17	21	18	12	13	9.1	14	14	7.8	4.6	2.5	2.8	2.3
18	19	17	11	25	8.7	32	14	9.8	4.3	2.9	2.8	8.7
19	18	16	11	31	8.6	19	13	8.6	4.2	2.2	2.9	4.4
20	17	15	11	21	8.6	18	13	8.0	4.0	2.1	2.9	3.0
21	16	14	10	19	8.5	31	12	9.6	3.9	2.1	3.1	2.8
22	16	14	9.7	21	9.3	25	12	8.0	3.9	4.4	3.0	2.5
23	15	13	9.6	28	8.8	20	11	7.7	3.8	17	3.0	2.6
24	15	13	9.4	20	8.7	19	12	7.5	3.8	3.9	2.8	2.6
25	14	12	13	19	9.8	40	11	7.6	3.7	2.9	2.5	17
26	14	18	11	17	9.0	25	11	7.0	4.5	2.9	2.4	7.9
27	13	16	10	16	8.7	21	15	6.6	3.9	2.6	2.2	4.4
28	12	15	9.7	15	8.7	20	20	6.5	3.7	2.4	2.2	3.9
29	12	14	9.4	15	8.2	45	16	6.4	4.6	32	2.2	3.6
30	11	13	9.3	13	---	33	17	6.2	5.5	6.7	2.1	3.5
31	11	---	9.0	13	---	37	---	6.2	---	4.7	1.9	---
TOTAL	633	477	345.1	478.5	282.1	580.5	531	309.6	147.6	138.6	117.6	106.2
MEAN	20.4	15.9	11.1	15.4	9.73	18.7	17.7	9.99	4.92	4.47	3.79	3.54
MAX	61	34	18	31	12	45	31	23	6.2	32	12	17
MIN	11	11	9.0	8.3	8.2	7.2	11	6.2	3.7	2.1	1.9	1.7
CFSM	2.87	2.24	1.56	2.17	1.37	2.63	2.49	1.41	.69	.63	.53	.50
IN.	3.32	2.50	1.81	2.51	1.48	3.04	2.78	1.62	.77	.73	.62	.56

CAL YR 1979 TOTAL 6849.0 MEAN 18.8 MAX 612 MIN 4.6 CFSM 2.65 IN 35.88
WTR YR 1980 TOTAL 4146.8 MEAN 11.3 MAX 61 MIN 1.7 CFSM 1.59 IN 21.72

01490000 CHICAMACOMICO RIVER NEAR SALEM, MD

LOCATION.--Lat 38°30'43", long 75°52'51", Dorchester County, Hydrologic Unit 02060007, on left bank 30 ft (9 m) downstream from Big Mill Pond dam, 1.6 mi (2.6 km) east of Salem, 3.5 mi (5.6 km) northwest of Vienna, and 13 mi (21 km) upstream from mouth.

DRAINAGE AREA.--15.0 mi² (38.8 km²).

PERIOD OF RECORD.--April 1951 to September 1980 (discontinued).

REVISED RECORDS.--WSP 1332: 1952.

GAGE.--Water-stage recorder. Altitude of gage is 10 ft (3.05 m).

REMARKS.--Records fair. Occasional regulation by Big Mill Pond. Diversion for irrigation of about 225 acres (91.1 hm²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years, 18.8 ft³/s (0.532 m³/s), 17.02 in/yr (432 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 715 ft³/s (20.2 m³/s) Feb. 26, 1979, gage height, 4.99 ft (1.521 m); maximum gage height, 5.62 ft (1.713 m) Feb. 26, 1979 (result of dam failure); minimum daily, 0.13 ft³/s (0.004 m³/s) July 6, 7, 1977 (result of pumpage for irrigation).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 233 ft³/s (6.60 m³/s) Oct. 3, gage height, 3.65 ft (1.113 m); minimum daily, 2.5 ft³/s (0.071 m³/s) July 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	19	21	16	18	16	58	46	9.6	5.8	7.2	6.1
2	70	19	20	15	19	17	42	45	9.0	5.2	7.3	5.2
3	147	34	19	15	20	17	35	36	8.8	5.2	7.3	4.5
4	115	39	19	14	19	18	45	31	9.3	5.4	7.6	4.2
5	61	28	19	17	19	23	75	26	8.4	5.2	7.3	7.2
6	54	24	20	17	19	31	43	23	8.3	5.1	9.5	11
7	40	23	30	16	19	24	33	22	9.7	4.9	8.2	7.0
8	31	22	24	20	19	21	28	20	18	5.2	6.8	5.6
9	36	21	20	20	19	20	63	20	15	6.1	6.3	5.1
10	65	22	19	17	19	19	99	18	13	4.6	6.0	5.4
11	125	45	18	20	19	19	57	18	11	3.8	6.4	4.9
12	70	139	18	95	19	18	39	18	11	3.6	6.7	4.7
13	58	88	25	56	18	25	33	17	10	3.7	6.2	4.5
14	68	78	51	38	17	88	32	16	9.6	2.5	5.5	4.5
15	48	56	34	34	18	49	42	14	9.4	2.5	6.2	4.7
16	38	45	28	27	23	30	34	13	9.2	2.9	8.3	4.5
17	33	37	25	24	24	23	24	13	7.3	2.7	7.0	6.3
18	29	34	21	30	19	61	21	15	6.1	5.6	6.1	12
19	26	31	20	100	18	53	19	18	4.9	5.3	6.5	7.5
20	25	28	20	58	19	34	18	17	6.8	4.5	6.7	5.6
21	24	26	19	41	19	54	16	22	6.3	3.6	6.0	5.4
22	23	25	18	36	20	72	15	22	5.9	3.4	6.5	4.9
23	23	23	18	73	21	42	14	18	5.9	35	7.3	4.5
24	26	23	18	55	21	33	14	15	5.9	20	7.3	4.4
25	25	22	28	39	24	91	26	14	5.8	9.6	6.8	6.7
26	23	33	27	33	25	68	20	13	9.1	7.9	5.6	11
27	21	43	21	27	21	42	19	12	14	7.4	5.2	6.7
28	21	34	18	25	20	33	39	11	9.3	7.0	5.1	5.1
29	21	28	17	23	19	85	57	10	7.9	10	4.7	4.6
30	20	23	17	20	---	101	48	9.9	7.5	10	5.2	4.5
31	19	---	16	19	---	65	---	9.7	---	7.9	6.1	---
TOTAL	1452	1112	688	1040	574	1292	1108	602.6	272.0	211.6	204.9	178.3
MEAN	46.8	37.1	22.2	33.5	19.8	41.7	36.9	19.4	9.07	6.83	6.61	5.94
MAX	147	139	51	100	25	101	99	46	18	35	9.5	12
MIN	19	19	16	14	17	16	14	9.7	4.9	2.5	4.7	4.2
CFSM	3.12	2.47	1.48	2.23	1.32	2.78	2.46	1.29	.61	.46	.44	.40
IN.	3.60	2.76	1.71	2.58	1.42	3.20	2.75	1.49	.67	.52	.51	.44

CAL YR 1979 TOTAL 13101.2 MEAN 35.9 MAX 725 MIN 7.2 CFSM 2.39 IN 32.49
WTR YR 1980 TOTAL 8735.4 MEAN 23.9 MAX 147 MIN 2.5 CFSM 1.59 IN 21.66

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD

LOCATION.--Lat 38°59'50", long 75°47'09", Caroline County, Hydrologic Unit 02060005, on left bank at highway bridge, 0.1 mi (0.2 km) upstream from Gravelly Branch, 2.0 mi (3.2 km) northeast of Greensboro, and 60 mi (97 km) upstream from mouth.

DRAINAGE AREA.--113 mi² (293 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1948 to current year.

REVISED RECORDS.--WSP 1622: 1948. WDR MD-DE-79-1: 1961 (P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3.51 ft (1.070 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years, 133 ft³/s (3.767 m³/s), 15.98 in/yr (406 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,970 ft³/s (197 m³/s) Aug. 4, 1967, gage height, 14.47 ft (4.410 m), from rating curve extended above 3,600 ft³/s (102 m³/s); minimum, 1.2 ft³/s (0.034 m³/s) Aug. 29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1935 is believed to have been higher than that of Aug. 4, 1967, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 904 ft³/s (25.6 m³/s) May 2, gage height, 6.27 ft (1.911 m), no peak above base of 1,000 ft³/s (28 m³/s); minimum daily, 16 ft³/s (0.45 m³/s) July 21, Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	93	136	100	118	91	781	572	81	76	119	29
2	71	90	124	96	111	81	657	836	75	52	72	24
3	97	119	115	97	111	90	393	533	68	56	66	18
4	136	225	109	89	104	97	335	333	67	129	229	16
5	144	249	105	91	97	102	439	220	67	128	318	22
6	113	168	105	108	88	139	353	193	61	75	143	38
7	104	137	119	92	88	151	225	157	71	54	87	35
8	92	125	141	98	87	129	205	136	176	48	69	30
9	82	116	131	107	86	119	202	131	158	51	58	21
10	121	112	116	105	88	107	349	126	92	45	54	21
11	371	124	110	108	87	105	585	111	75	39	54	26
12	515	310	105	441	86	109	335	104	66	34	55	19
13	369	500	109	649	82	110	217	99	60	32	101	20
14	465	380	155	376	80	389	196	97	57	30	88	17
15	480	316	207	283	82	599	196	88	53	27	54	19
16	315	255	159	229	91	359	196	80	70	22	55	21
17	223	198	138	181	112	249	155	74	78	28	48	21
18	168	162	125	174	105	225	144	82	64	28	41	40
19	142	143	113	405	95	241	131	101	55	22	49	60
20	128	131	108	532	92	194	126	97	49	21	178	37
21	116	124	104	345	95	194	118	92	43	16	214	31
22	111	117	101	266	103	329	111	92	41	20	100	28
23	104	113	101	321	115	333	104	88	38	80	72	25
24	113	111	101	385	119	242	99	82	39	139	64	22
25	160	107	128	284	114	401	99	162	35	65	58	44
26	161	124	166	213	115	608	99	310	43	35	58	88
27	128	252	157	165	111	375	120	179	83	28	45	110
28	115	306	128	142	103	242	209	116	70	24	39	75
29	108	221	115	141	99	330	364	94	49	258	35	48
30	103	163	109	131	---	803	460	83	59	737	33	39
31	98	---	104	122	---	675	---	78	---	358	32	---
TOTAL	5520	5591	3836	6863	2864	8218	8003	5546	2043	2757	2680	1036
MEAN	178	186	124	221	98.8	265	267	179	68.1	88.9	86.5	34.5
MAX	515	500	207	649	119	803	781	836	176	737	318	110
MIN	67	90	101	89	80	81	99	74	35	16	32	16
CFSM	1.58	1.65	1.10	1.96	.87	2.35	2.36	1.58	.60	.79	.77	.31
IN.	1.82	1.84	1.26	2.26	.94	2.71	2.63	1.83	.67	.91	.88	.34

CAL YR 1979 TOTAL 81847 MEAN 224 MAX 5900 MIN 36 CFSM 1.98 IN 26.94
WTR YR 1980 TOTAL 54957 MEAN 150 MAX 836 MIN 16 CFSM 1.33 IN 18.09

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to current year.
WATER TEMPERATURES: October 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 184 micromhos Sept. 23, 1976; minimum daily, 40 micromhos January 31, 1980.
WATER TEMPERATURE: Maximum daily, 28.0°C July 23, 1978, and July 22, 1980; minimum daily, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 169 micromhos July 19; minimum daily, 40 micromhos Jan. 31.
WATER TEMPERATURE: Maximum daily, 28.0°C July 22; minimum daily, 0.0°C Feb. 2-6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY										
24...	ND	--	ND	--	ND	--	ND	--	ND	--
24...	--	ND	--	ND	--	ND	--	ND	--	ND
JUL										
25...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY										
24...	ND	--	ND	--	ND	--	ND	--	ND	--
24...	--	ND	--	ND	--	ND	--	ND	--	ND
JUL										
25...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)
MAY										
24...	ND	--	ND	--	ND	--	ND	--	ND	--
24...	--	ND	--	ND	--	ND	--	ND	--	ND
JUL										
25...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY										
24...	ND	--	ND	--	ND	--	ND	--	ND	--
24...	--	ND	--	ND	--	ND	--	ND	--	ND
JUL										
25...	ND	--	ND	--	ND	--	ND	--	ND	--

ND NOT DETECTED

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT											
24...	1030	125	117	7.6	1[illegible]	16.5	2.0	5.8	--	--	38
DEC											
05...	1030	108	100	5.9	9.5	2.5	3.0	13.5	146	58	31
21...	1130	92	99	5.9	12.0	2.0	3.0	13.0	230	110	34
JAN											
24...	1030	395	77	5.4	-5.0	1.0	10	12.4	120	230	26
FEB											
25...	1145	120	108	5.9	5.0	7.0	2.0	12.2	37	96	33
MAR											
18...	1320	220	88	5.6	7.0	12.0	8.0	10.8	90	42	25
APR											
22...	0955	110	103	6.2	18.0	15.3	2.2	8.0	--	--	31
MAY											
27...	1050	180	85	5.8	18.0	17.5	10	6.8	120	240	25
JUN											
24...	1045	39	145	6.7	26.5	20.5	3.5	7.0	85	110	34
JUL											
28...	1040	24	145	6.4	25.0	23.7	7.7	6.3	80	90	44
SEP											
08...	1030	21	147	6.8	24.5	20.2	2.4	7.2	130	50	46

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT											
24...	19	10	3.2	7.3	36	.5	2.5	19	16	11	.1
DEC											
05...	24	8.4	2.5	6.7	38	.5	2.0	7	16	11	.0
21...	19	9.2	2.6	6.7	37	.5	1.7	15	16	10	.1
JAN											
24...	11	6.7	2.2	4.3	25	.4	2.1	15	16	8.3	.1
FEB											
25...	13	9.0	2.6	6.7	29	.5	1.8	20	14	11	.1
MAR											
18...	18	6.7	2.1	5.3	30	.5	1.6	7	14	8.7	.1
APR											
22...	15	8.4	2.5	6.8	31	.5	1.7	16	15	10	.1
MAY											
27...	18	6.5	2.1	4.3	25	.4	2.3	7	13	8.0	.1
JUN											
24...	18	9.3	2.7	8.0	32	.6	1.9	16	16	12	.1
JUL											
28...	22	12	3.4	8.2	27	.5	2.7	22	15	13	.1
SEP											
08...	24	13	3.2	9.3	29	.6	2.5	22	15	14	.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)
OCT											
24...	19	99	84	.13	33.4	.67	.62	.01	.00	.01	.00
DEC											
05...	19	86	76	.12	25.1	1.4	1.4	.16	.13	.19	.17
21...	20	82	81	.11	20.4	1.4	1.2	.04	.00	.05	.00
JAN											
24...	13	82	65	.11	87.5	.83	.84	.00	.04	.00	.05
FEB											
25...	15	83	78	.11	26.9	1.2	1.2	.04	.04	.05	.05
MAR											
18...	14	84	61	.11	49.9	.96	1.0	.04	.06	.05	.08
APR											
22...	14	88	73	.12	26.1	1.0	1.0	.05	.07	.06	.09
MAY											
27...	13	71	58	.10	34.5	2.0	1.0	.29	.31	.35	.40
JUN											
24...	15	103	80	.14	10.8	1.2	1.1	.08	.01	.10	.01
JUL											
28...	17	119	89	.16	7.71	.91	.93	.03	.04	.04	.05
SEP											
08...	20	98	95	.13	5.56	1.0	1.1	.01	.00	.01	.00

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)
OCT											
24...	.65	.70	.66	.00	.78	1.3	1.4	5.9	.050	.15	.030
DEC											
05...	.56	--	.72	--	--	2.1	--	9.4	.040	.12	.040
21...	.86	.69	.90	.21	.69	2.3	1.9	10	.040	.12	.010
JAN											
24...	1.2	.66	1.2	.50	.70	2.0	1.5	9.0	.080	.25	.030
FEB											
25...	.40	.20	.44	.20	.24	1.6	1.4	7.3	.040	.12	.020
MAR											
18...	.34	.35	.38	.00	.41	1.3	1.4	5.9	.060	.18	.030
APR											
22...	.55	.31	.60	.22	.38	1.6	1.4	7.1	.060	.18	.020
MAY											
27...	.81	.43	1.1	.36	.74	3.1	1.7	14	.160	.49	.040
JUN											
24...	.27	--	.35	--	--	1.6	--	6.9	.050	.15	.030
JUL											
28...	.19	.09	.22	.09	.13	1.1	1.1	5.0	.050	.15	.060
SEP											
08...	.18	--	.19	--	--	1.2	--	5.3	.040	.12	.000

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)
OCT											
24...	--	--	1	--	--	100	--	--	2	--	--
DEC											
05...	--	--	2	--	--	60	--	--	0	--	--
21...	1	0	1	100	20	80	3	1	2	20	10
FEB											
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
18...	1	0	1	100	20	80	1	0	2	10	<0
MAY											
27...	--	--	--	--	--	--	--	--	--	--	--
JUN											
24...	5	0	7	50	--	80	1	0	8	20	--
SEP											
08...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
OCT											
24...	10	7	6	1	--	--	2	--	--	420	--
DEC											
05...	10	--	--	0	--	--	5	--	--	210	--
21...	10	0	0	2	4	1	3	830	380	450	0
FEB											
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
18...	10	1	0	3	2	0	2	960	770	190	4
MAY											
27...	--	--	--	--	--	--	--	--	--	--	--
JUN											
24...	20	8	0	0	4	0	4	1300	540	760	2
SEP											
08...	--	--	--	--	--	--	--	--	--	--	--

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI)
OCT 24...	--	0	--	--	60	--	--	.1	--	--
DEC 05...	--	0	--	--	40	--	--	.1	--	--
21...	0	0	50	10	40	.1	.0	.1	3	2
FEB 25...	--	--	--	--	--	--	--	--	--	--
MAR 18...	4	0	40	0	40	.1	.0	.1	7	5
MAY 27...	--	--	--	--	--	--	--	--	--	--
JUN 24...	2	0	40	10	30	.1	--	.1	2	2
SEP 08...	--	--	--	--	--	[illegible]	--	--	--	--

DATE	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 24...	3	--	--	0	--	--	0	--	--	10
DEC 05...	2	--	--	1	--	--	0	--	--	30
21...	1	1	1	0	0	0	0	20	0	30
FEB 25...	--	--	--	--	0	--	--	--	--	--
MAR 18...	2	0	0	0	0	0	0	160	140	20
MAY 27...	--	--	--	--	0	--	--	--	--	--
JUN 24...	0	0	0	0	0	0	0	20	20	0
SEP 08...	--	--	--	--	0	--	--	--	--	--

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)
DEC 05...	6.0	--	--
JAN 24...	13	--	1.7
FEB 25...	4.2	--	--
MAR 18...	--	7.4	.3
APR 22...	7.7	--	--

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)
MAY 27...	13	--	--
JUN 24...	--	3.3	.5
JUL 28...	4.4	--	--
SEP 08...	4.0	--	--

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)
DEC												
21...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB												
25...	--	--	ND	--	ND	--	ND	--	--	ND	--	--

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	O,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
DEC												
21...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB												
25...	ND	--	--	--	ND	--	ND	--	ND	--	ND	--

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)
DEC												
21...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB												
25...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
DEC											
21...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB											
25...	ND	--	ND	--	ND	--	ND	--	--	--	--

DATE	PHYTOPLANKTON, TOTAL (CELLS PER ML)	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLOROPHYLL RATIO PERIPHYTON (UNITS)	CHLOR-A PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M2)	CHLOR-B PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M2)
DEC						
05...	3	--	--	--	--	--
21...	--	1.57	1.97	17.5	22.9	2.17
MAR						
18...	220	.000	.000	.00	.000	.000
MAY						
27...	3700	1.65	2.36	183	3.88	1.45
JUN						
24...	730	1.73	2.28	663	.830	.480
JUL						
28...	490	--	--	--	--	--

ND NOT DETECTED

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT			
24...	4	1.3	100
DEC			
05...	3	.87	100
21...	3	--	100
JAN			
24...	10	11	96
FEB			
25...	3	.97	100
MAR			
18...	12	7.1	88
APR			
22...	5	--	96
MAY			
27...	25	12	92
JUN			
24...	5	.53	95
SEP			
08...	1	.06	100

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	110	94	99	60	108	74	76	123	140	108	144
2	120	108	97	104	108	65	72	71	127	131	120	139
3	114	102	101	104	110	110	75	76	108	133	115	145
4	118	104	100	102	111	109	79	76	122	128	85	146
5	92	98	100	98	110	107	78	86	145	119	79	129
6	100	95	94	101	109	101	80	94	142	128	87	140
7	108	97	93	103	108	100	85	94	129	140	109	147
8	109	96	88	106	110	95	89	101	108	140	118	148
9	110	98	86	103	108	95	89	104	109	141	128	147
10	109	111	87	98	108	99	88	103	115	144	127	143
11	95	106	89	108	109	95	61	103	121	141	127	144
12	85	95	90	85	108	95	82	108	123	142	121	145
13	88	92	98	70	110	99	84	113	127	144	122	147
14	91	85	91	73	109	87	80	110	130	149	90	145
15	87	92	83	77	109	70	91	111	130	149	122	145
16	93	87	87	83	108	75	88	119	129	150	128	146
17	100	90	87	86	105	82	91	119	123	150	132	144
18	105	94	84	87	104	85	93	112	113	151	130	133
19	109	95	88	84	104	90	99	112	131	169	---	142
20	110	103	89	71	106	91	99	110	129	155	81	126
21	112	99	99	73	106	91	100	110	135	152	72	125
22	113	100	92	82	100	92	102	112	131	156	100	138
23	118	97	103	85	100	83	104	112	131	140	118	142
24	117	100	100	77	100	87	120	112	145	100	123	137
25	110	101	99	78	100	90	113	107	141	122	128	128
26	107	101	94	79	100	70	113	76	131	140	128	128
27	100	96	93	85	99	74	109	85	130	151	130	104
28	107	87	95	87	100	81	96	97	131	145	132	113
29	105	88	93	48	96	87	90	105	131	116	134	129
30	107	88	93	68	---	61	74	113	133	63	139	137
31	108	---	95	40	---	61	---	116	---	93	143	---
MEAN	105	97	93	85	104	88	90	101	127	136	116	138

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	12.0	4.0	3.0	.5	.5	10.5	12.5	23.0	23.0	26.0	27.0
2	20.0	12.0	4.0	3.0	.0	.5	12.5	14.0	24.5	22.5	25.5	25.5
3	20.0	14.0	3.0	4.0	.0	.5	14.5	15.5	23.5	24.0	26.0	26.0
4	19.5	11.0	3.5	3.5	.0	2.0	14.5	16.5	22.5	23.5	25.5	24.0
5	19.0	9.0	3.5	1.5	.0	4.5	14.0	20.0	21.0	24.0	26.0	23.0
6	17.0	8.0	5.0	1.0	.0	6.5	14.0	21.5	19.5	24.5	26.0	23.0
7	16.0	9.5	8.0	2.5	.5	7.5	15.0	19.5	20.5	22.0	27.0	24.0
8	14.5	8.5	7.5	2.0	1.5	9.0	17.0	17.5	22.0	21.5	25.0	23.0
9	14.5	9.5	4.5	1.5	1.5	12.0	16.0	15.5	20.0	21.5	26.0	20.5
10	13.0	13.0	4.0	5.0	2.0	11.0	18.0	14.5	19.0	23.5	26.5	22.0
11	9.0	13.0	5.0	6.5	1.5	10.5	15.5	16.5	17.0	24.0	25.5	19.5
12	9.5	11.5	9.0	4.0	2.0	6.0	17.0	19.0	18.0	24.5	26.0	19.0
13	10.5	11.5	9.5	5.5	1.0	5.0	17.5	22.0	18.0	24.0	24.5	21.0
14	11.5	10.5	7.5	7.0	2.0	5.0	15.5	22.0	20.0	23.5	23.5	22.0
15	10.5	9.0	5.0	6.0	3.0	6.0	16.5	18.5	22.0	23.0	25.0	22.5
16	11.0	9.5	5.0	6.0	4.0	8.0	14.5	19.0	21.5	24.5	24.5	21.0
17	13.0	8.5	5.0	6.0	1.5	9.0	10.0	17.0	18.5	26.0	22.0	21.5
18	15.0	9.5	2.0	6.5	2.0	11.5	13.5	17.5	18.5	25.5	22.0	22.0
19	16.0	10.5	.5	5.0	2.0	10.0	15.0	18.5	18.5	27.0	---	21.5
20	15.5	10.5	2.5	4.0	4.5	11.0	15.5	20.0	20.5	27.0	23.0	19.5
21	18.0	9.5	1.0	4.0	5.5	12.0	17.0	18.5	18.5	27.5	22.5	21.5
22	18.0	11.0	3.5	4.0	7.5	9.0	16.0	17.0	20.0	28.0	22.0	22.5
23	18.5	12.5	6.5	5.0	8.0	6.5	15.5	22.0	20.5	25.0	20.5	23.5
24	16.0	14.5	9.0	1.0	9.0	8.5	18.5	20.0	20.5	24.5	22.0	22.0
25	12.5	15.5	10.0	2.5	9.0	8.5	19.0	19.0	24.0	24.0	24.0	20.5
26	10.5	17.0	9.5	2.5	6.0	7.5	16.0	19.5	22.0	25.0	24.0	20.5
27	10.0	14.0	7.0	2.0	3.0	8.0	14.0	17.5	21.5	24.5	23.0	18.0
28	9.5	12.5	4.5	2.5	3.0	10.5	14.0	19.5	23.0	23.5	24.0	15.5
29	10.0	10.0	4.0	2.5	.5	10.5	14.5	19.0	24.0	24.5	25.0	16.5
30	11.5	6.0	4.5	1.0	---	11.0	14.0	21.5	25.0	24.5	25.0	17.5
31	11.0	---	4.0	.5	---	10.0	---	20.5	---	25.0	25.5	---
MEAN	14.0	11.0	5.0	3.5	3.0	7.5	15.0	18.5	21.0	24.5	24.5	21.5

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

DATE	DEC 5,79	MAR 18,80	MAY 27,80	JUN 24,80	JUL 28,80
TIME	1030	1300	1050	1045	1040
TOTAL CELLS/ML	3	220	3700	730	490
DIVERSITY: DIVISION	0.0	1.6	1.0	1.6	1.0
.CLASS	0.0	1.6	1.0	1.6	1.0
..ORDER	0.0	0.0	1.2	1.8	1.3
...FAMILY	0.9	0.0	1.2	1.8	1.3
....GENUS	0.9	0.0	1.5	2.0	1.4

ORGANISM	DEC 5,79 CELLS /ML	DEC 5,79 PER-CENT	MAR 18,80 CELLS /ML	MAR 18,80 PER-CENT	MAY 27,80 CELLS /ML	MAY 27,80 PER-CENT	JUN 24,80 CELLS /ML	JUN 24,80 PER-CENT	JUL 28,80 CELLS /ML	JUL 28,80 PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHLOROCOCCACEAE										
....CHLOROCOCCUM	--	-	25	12	--	-	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	20	9	--	-	--	-	39	8
....CHLORELLA	--	-	--	-	--	-	13	2	--	-
....OOCYSTIS	--	-	--	-	--	-	13	2	26	5
....WESTELLA	--	-	--	-	--	-	210#	28	--	-
...SCENEDESMACEAE										
....CRUCIGENIA	--	-	--	-	2800#	76	--	-	--	-
....SCENEDESMUS	--	-	--	-	130	3	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	35#	16	130	3	26	4	26	5
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	65	2	--	-	26	5
....MELOSIRA	--	-	--	-	130	3	140#	19	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	10	5	--	-	--	-	--	-
...DIATOMACEAE										
....DIATOMA	--	-	5	2	--	-	--	-	--	-
...EUNOTIACEAE										
....EUNOTIA	--	-	10	5	--	-	--	-	--	-
...FRAGILARIACEAE										
....SYNEDRA	--	-	15	7	--	-	--	-	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	30	14	--	-	--	-	--	-
...NAVICULACEAE										
....NAVICULA	1#	33	5	2	--	-	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	2#	67	20	9	65	2	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE	--	-	35#	16	--	-	--	-	--	-
..CRYPTOMONADALES										
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	130	3	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	--	-	--	-	190	5	320#	44	13	3
..HORMOGONALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	--	-	--	-	--	-	--	-	360#	74
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	5	2	--	-	13	2	--	-
....TRACHELOMONAS	--	-	--	-	65	2	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

01492000 BEAVERDAM BRANCH AT MATTHEWS, MD

LOCATION.--Lat 38°48'41", long 75°58'15", Talbot County, Hydrologic Unit 01060005, on left bank 50 ft (15 m) upstream from bridge on State Highway 328, 1.0 mi (1.6 km) west of Matthews, 1.2 mi (1.9 km) upstream from mouth, and 6 mi (10 km) northeast of Easton.

DRAINAGE AREA.--5.85 mi² (15.15 km²).

PERIOD OF RECORD.--July 1950 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2.33 ft (0.710 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years, 6.90 ft³/s (0.195 m³/s), 16.02 in/yr (407 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,200 ft³/s (62.3 m³/s) Sept. 12, 1960, gage height, 10.24 ft (3.121 m), from high-water mark in gage shelter, from rating curve extended above 440 ft³/s (12.5 m³/s) on basis of contracted-opening measurement at gage height 7.15 ft (2.179 m); no flow at times during many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 120 ft³/s (3.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 10	1845	*159	4.50	3.17	0.966	Jan. 12	0700	122	3.46	2.79	0.850

Minimum discharge, 0.04 ft³/s (0.001 m³/s) Aug. 27, 28, 29, 30, 31, Sept. 1, 2, gage height, 1.05 ft (0.320 m).

REVISIONS.--The minimum discharge for water year 1979 has been revised to 0.11 ft³/s (0.003 m³/s) Oct. 9, 1979, gage height, 1.13 ft (0.344 m). This supersedes the figure published in the report for 1979.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	4.6	5.8	4.0	3.4	3.2	17	25	1.3	.50	.61	.10
2	8.1	4.8	5.5	3.9	2.6	3.4	10	18	1.0	.37	.80	.08
3	9.7	54	5.0	3.6	2.5	4.0	8.4	10	1.6	.50	.27	.16
4	5.3	14	5.2	3.6	2.7	4.6	60	5.4	2.2	.63	.25	.13
5	6.3	8.0	5.2	4.1	2.8	15	23	4.9	1.1	.44	.22	4.9
6	6.4	7.0	6.8	4.3	2.8	11	9.6	4.1	.93	.35	.21	.82
7	3.8	6.6	11	5.2	3.2	6.4	7.9	3.5	1.0	.26	.18	.19
8	2.9	6.0	6.8	7.7	3.3	6.2	6.8	3.8	.99	.48	.16	.13
9	7.9	5.9	5.5	6.4	3.8	5.3	15	3.9	.73	.61	.14	.11
10	80	6.3	5.2	4.8	3.9	4.7	50	3.1	.75	.62	.12	.16
11	45	36	5.0	18	3.8	7.9	11	2.8	.77	.56	.98	.13
12	12	56	4.6	71	3.8	4.8	7.9	2.8	.64	.47	.25	.13
13	36	17	11	10	3.3	23	7.0	3.5	.59	.36	.19	.12
14	20	17	12	8.3	3.7	44	8.3	2.5	.57	.28	.16	.13
15	8.8	9.0	7.0	7.2	4.1	9.0	9.0	2.0	.66	.29	.23	.13
16	7.9	8.0	6.2	6.1	9.9	6.8	6.2	1.8	1.4	.28	.35	.11
17	7.1	7.7	5.6	5.6	6.4	6.8	5.0	1.8	1.3	1.0	.18	.25
18	6.4	7.2	4.5	24	4.2	11	4.9	5.7	.84	.61	.17	4.8
19	6.1	6.7	4.6	52	4.3	6.9	4.8	3.8	.78	.24	.29	.54
20	5.8	6.3	4.5	18	4.8	6.2	4.5	2.9	.67	.20	.28	.24
21	5.5	6.1	4.2	7.9	5.4	32	4.3	4.6	.53	.18	.18	.21
22	5.3	5.8	4.4	11	7.7	13	3.9	3.3	.53	12	.17	.19
23	5.4	5.8	4.4	29	6.5	7.8	3.8	2.3	.53	37	.22	.17
24	26	5.8	4.6	8.4	6.2	8.3	3.7	2.1	.53	2.0	.19	.24
25	8.3	5.8	15	7.1	7.8	56	5.2	2.1	.52	.40	.14	2.4
26	6.2	35	7.4	6.4	6.3	11	4.1	1.6	1.9	.53	.11	1.0
27	5.4	21	5.3	5.7	4.6	8.3	15	1.3	1.3	.41	.09	.34
28	5.3	8.6	4.7	5.6	4.4	7.4	38	1.2	.73	.38	.08	.24
29	5.3	7.3	4.4	5.3	4.0	57	18	1.2	.61	.66	.09	.23
30	4.7	6.3	4.3	4.3	---	19	8.9	1.1	.99	.37	.10	.22
31	4.6	---	4.1	4.1	---	20	---	1.4	---	.30	.09	---
TOTAL	376.7	395.6	189.8	354.6	132.2	439.2	381.2	126.3	27.99	63.68	7.49	18.60
MEAN	12.2	13.2	6.12	11.4	4.56	14.2	12.7	4.07	.93	2.05	.24	.62
MAX	80	56	15	71	9.9	57	60	25	2.2	37	.98	4.9
MIN	2.9	4.6	4.1	3.6	2.5	3.2	3.7	1.1	.52	.18	.08	.08
CFSM	2.09	2.26	1.05	1.95	.78	2.43	2.17	.70	.16	.35	.04	.11
IN.	2.48	2.52	1.21	2.25	.84	2.79	2.42	.80	.18	.40	.05	.12

CAL YR 1979 TOTAL 5040.59 MEAN 13.8 MAX 461 MIN .40 CFSM 2.36 IN 32.85
WTR YR 1980 TOTAL 2513.36 MEAN 6.87 MAX 80 MIN .08 CFSM 1.17 IN 15.98

01493000 UNICORN BRANCH NEAR MILLINGTON, MD

LOCATION.--Lat 39°14'59", long 75°51'40", Queen Annes County, Hydrologic Unit 02060002, on right bank 20 ft (6 m) upstream from bridge on State Highway 313, 0.9 mi (1.4 km) upstream from mouth, and 1.4 mi (2.3 km) southwest of Millington.

DRAINAGE AREA.--22.3 mi² (57.8 km²).

PERIOD OF RECORD.--January 1948 to current year.

REVISED RECORDS.--WSP 1382: 1952(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3.57 ft (1.088 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional regulation at low and medium flow by fish hatchery above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years, 25.1 ft³/s (0.711 m³/s), 15.29 in/yr (388 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft³/s (30.0 m³/s) Sept. 12, 1960, gage height, 7.17 ft (2.185 m); no flow for part of each day June 13, 14, 1965, caused by regulation at Unicorn Lake Dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft³/s (5.1 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 10	1330	*366	10.4	4.75	1.448	July 23	1100	202	5.72	4.10	1.250

Minimum discharge, 0.89 ft³/s (0.025 m³/s) Feb. 25, gage height, 1.66 ft (0.506 m); minimum daily, 9.5 ft³/s (0.27 m³/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	24	30	24	25	18	118	100	29	23	14	10
2	38	26	28	23	24	17	74	91	23	16	13	9.8
3	31	39	36	20	23	18	51	60	25	24	16	10
4	25	42	37	17	17	19	63	47	32	39	18	9.7
5	22	34	35	17	15	23	86	36	21	26	16	11
6	22	31	38	17	16	28	55	31	19	18	15	11
7	20	29	34	17	16	25	43	27	22	16	13	11
8	19	28	30	25	18	23	38	26	57	15	12	10
9	25	26	30	29	20	23	50	27	27	15	13	9.8
10	52	27	29	28	20	21	238	25	20	14	10	10
11	102	34	24	24	20	21	151	22	19	14	14	10
12	68	63	24	27	20	20	79	22	16	13	21	9.5
13	58	59	24	54	20	25	58	21	15	13	14	10
14	80	49	26	45	20	70	50	19	16	12	11	10
15	57	43	28	41	20	56	52	18	23	12	13	10
16	43	36	27	44	20	35	44	18	73	12	14	9.6
17	37	33	36	44	20	30	38	19	24	12	12	13
18	33	31	38	36	20	33	34	27	19	16	13	69
19	31	30	28	35	20	31	33	28	17	14	31	27
20	31	28	23	58	20	26	31	23	16	12	31	15
21	30	27	23	47	20	38	30	28	15	12	15	13
22	29	26	23	46	21	59	28	26	15	29	14	12
23	28	26	23	48	21	40	27	22	15	148	13	12
24	31	25	23	52	21	33	26	26	15	78	12	11
25	32	24	24	46	13	67	28	49	14	33	12	19
26	30	45	33	44	19	60	29	28	14	23	13	18
27	28	67	38	42	21	40	40	23	15	19	11	13
28	28	49	32	40	21	33	60	22	15	16	11	12
29	27	38	25	31	20	64	84	20	23	17	11	12
30	26	33	25	26	---	100	71	20	46	15	11	11
31	25	---	25	26	---	80	---	36	---	13	11	---
TOTAL	1149	1072	899	1073	571	1176	1809	987	700	739	448	418.4
MEAN	37.1	35.7	29.0	34.6	19.7	37.9	60.3	31.8	23.3	23.8	14.5	13.9
MAX	102	67	38	58	25	100	238	100	73	148	31	69
MIN	19	24	23	17	13	17	26	18	14	12	10	9.5
CFSM	1.66	1.60	1.30	1.55	.88	1.70	2.70	1.43	1.05	1.07	.65	.62
IN.	1.92	1.79	1.50	1.79	.95	1.96	3.02	1.65	1.17	1.23	.75	.70

CAL YR 1979 TOTAL 14124.0 MEAN 38.7 MAX 631 MIN 10 CFSM 1.74 IN 23.56
WTR YR 1980 TOTAL 11041.4 MEAN 30.2 MAX 238 MIN 9.5 CFSM 1.35 IN 18.42

01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD

LOCATION.--Lat 39°16'48", long 76°00'54", Kent County, Hydrologic Unit 02060002, on right bank 200 ft (61 m) upstream from highway bridge, 2 mi (3.2 km) southwest of Kennedyville, and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--12.7 mi² (32.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WSP 1552: 1952, 1953(P), 1954(M), 1955, 1956-57(M). WDR MD-DE-76-1: Drainage area. WDR MD-DE-79-1: 1961(M).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (4.6 m).

REMARKS.--Water-discharge records good below 50 ft³/s (1.42 m³/s) and fair above. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years, 10.7 ft³/s (0.303 m³/s), 11.44 in/yr (291 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft³/s (212 m³/s) June 22, 1972, gage height, 13.07 ft (3.984 m), from rating curve extended above 590 ft³/s (16.7 m³/s) on basis of Type IV culvert and flow-over-road measurement of peak flow; minimum, 0.60 ft³/s (0.017 m³/s) Aug. 28, 29, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 162 ft³/s (4.59 m³/s) June 16, gage height, 4.36 ft (1.329 m), no peak above base of 200 ft³/s (5.6 m³/s); minimum, 2.6 ft³/s (0.074 m³/s) Aug. 27-30, gage height, 1.30 ft (0.396 m).

REVISIONS.--The maximum discharge for the water year 1976 has been revised to 525 ft³/s (14.9 m³/s) Jan. 1, 1976, gage height, 6.45 ft (1.966 m), superseding figure published in the report for 1976. Discharges for Jan. 27, 1976, and July 11, 1976, have been revised and they are no longer peaks above base.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	7.5	8.4	7.8	5.7	6.1	38	27	7.5	12	4.0	3.9
2	28	7.9	8.6	8.1	5.4	6.4	13	16	6.4	6.4	4.0	3.6
3	14	17	8.1	7.8	5.8	7.5	10	15	7.4	49	4.3	3.2
4	10	14	8.4	7.5	6.0	8.0	37	9.8	9.2	50	7.1	3.2
5	9.4	9.2	8.7	8.3	6.2	13	44	8.0	6.4	8.8	4.5	4.4
6	8.9	8.2	9.0	8.1	6.3	11	13	7.4	6.0	6.4	4.5	4.6
7	7.8	8.7	12	9.4	7.1	8.2	10	6.9	10	5.2	4.1	3.9
8	7.3	8.1	8.8	9.9	7.7	8.7	9.3	8.8	112	5.4	3.8	3.6
9	11	8.5	7.5	8.9	8.1	10	15	8.6	21	5.9	3.6	3.6
10	59	9.4	7.7	7.2	8.6	7.6	24	7.4	8.6	5.3	3.6	3.8
11	58	13	7.5	11	7.9	8.0	13	7.3	7.1	4.9	5.2	3.6
12	17	24	8.1	29	8.3	6.5	10	7.6	6.9	4.7	15	3.2
13	15	14	11	12	7.3	11	9.3	9.0	6.3	4.3	6.9	3.2
14	13	11	12	9.3	7.6	25	10	7.8	6.3	4.0	4.4	3.5
15	9.2	9.2	8.3	8.8	8.4	11	14	6.7	11	4.0	4.6	3.6
16	8.7	8.5	8.1	8.1	13	8.2	10	6.3	121	4.2	5.3	3.3
17	8.7	8.1	8.8	8.7	10	9.2	9.7	6.3	23	5.2	4.0	3.5
18	8.7	8.1	7.1	13	7.5	13	8.7	13	8.6	4.8	4.0	14
19	8.3	8.1	8.1	35	7.8	7.8	8.7	12	7.3	4.4	15	6.6
20	8.1	8.1	8.1	13	8.7	7.5	8.7	9.8	6.7	4.4	11	4.4
21	9.4	8.1	8.0	9.0	9.7	19	8.6	12	5.6	4.6	5.3	4.4
22	9.4	8.1	8.9	10	13	21	8.1	10	5.8	9.6	4.8	4.3
23	7.6	8.1	9.2	17	12	11	8.0	8.1	5.9	15	4.8	4.0
24	12	8.1	9.1	9.0	12	10	7.7	9.3	5.8	7.4	4.5	3.8
25	10	8.1	20	8.3	11	25	8.9	16	5.4	5.2	4.4	5.6
26	7.8	60	14	8.3	9.3	12	11	8.0	5.8	4.8	4.0	5.8
27	7.5	59	8.9	7.9	7.7	8.4	15	6.4	5.7	4.8	3.3	4.1
28	7.7	14	8.3	8.1	7.9	8.2	18	6.2	5.3	4.8	2.6	4.0
29	8.1	9.7	8.1	8.1	7.1	34	16	6.0	12	4.7	2.7	4.0
30	7.6	8.6	8.1	6.7	---	23	14	5.8	61	4.7	3.2	4.0
31	7.5	---	8.1	6.4	---	27	---	8.4	---	4.4	3.8	---
TOTAL	432.7	402.4	285.0	329.7	243.1	392.3	429.7	296.9	517.4	269.3	162.3	130.7
MEAN	14.0	13.4	9.19	10.6	8.38	12.7	14.3	9.58	17.2	8.69	5.24	4.36
MAX	59	60	20	35	13	34	44	27	121	50	15	14
MIN	7.3	7.5	7.1	6.4	5.4	6.1	7.7	5.8	5.3	4.0	2.6	3.2
CFSM	1.10	1.06	.72	.84	.66	1.00	1.13	.75	1.35	.68	.41	.34
IN.	1.27	1.18	.83	.97	.71	1.15	1.26	.87	1.52	.79	.48	.38

CAL YR 1979 TOTAL 5927.8 MEAN 16.2 MAX 507 MIN 4.4 CFSM 1.28 IN 17.36
WTR YR 1980 TOTAL 3891.5 MEAN 10.6 MAX 121 MIN 2.6 CFSM .84 IN 11.40

01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT												
24...	1200	12	191	7.7	12.0	13.0	15	7.1	--	--	57	17
DEC												
05...	1210	8.2	123	5.7	11.0	6.5	30	11.6	860	1100	38	4
20...	1130	8.0	113	5.8	13.0	10.0	28	12.8	310	730	42	16
JAN												
24...	1315	9.2	131	5.8	-2.5	1.0	30	12.4	350	530	42	9
FEB												
26...	1210	11	134	5.7	1.5	3.5	10	12.1	82	110	41	13
MAR												
18...	1010	13	120	6.1	6.0	10.0	30	9.6	2200	1800	41	11
APR												
22...	1225	8.4	119	6.4	22.0	14.5	10	9.4	--	--	39	6
MAY												
28...	1030	6.5	114	6.4	18.0	14.5	10	7.8	350	470	41	16
JUN												
25...	1110	5.6	130	6.7	26.0	19.5	20	7.1	820	1000	36	9
JUL												
29...	1045	5.6	132	6.3	24.5	22.3	20	6.2	710	1100	45	12
SEP												
09...	1300	3.7	122	6.6	21.0	19.8	10	7.0	2000	1700	44	12

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT												
24...	15	4.7	5.1	14	.3	8.4	40	5.3	13	.2	12	106
DEC												
05...	10	3.2	5.0	26	.4	4.2	34	4.9	11	.1	11	101
20...	11	3.6	5.1	26	.3	3.1	26	4.7	11	.1	12	87
JAN												
24...	11	3.6	4.6	17	.3	5.4	33	9.3	12	.1	8.9	95
FEB												
26...	11	3.3	5.3	20	.4	4.0	28	5.4	13	.2	9.1	80
MAR												
18...	11	3.3	5.3	20	.4	3.7	30	7.0	11	.1	8.0	94
APR												
22...	10	3.4	5.0	20	.3	3.5	33	4.7	10	.1	7.8	84
MAY												
28...	11	3.4	4.8	19	.3	2.7	25	4.1	9.9	.2	11	89
JUN												
25...	9.2	3.1	4.5	19	.3	4.1	27	3.8	9.6	.2	9.9	88
JUL												
29...	12	3.7	5.0	18	.3	3.7	33	2.5	10	.2	9.9	--
SEP												
09...	12	3.4	4.9	18	.3	3.4	32	2.3	9.4	.1	13	75

01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT												
24...	89	.14	3.43	.89	.070	.21	1800	1100	770	270	30	240
DEC												
05...	70	.14	2.24	2.3	.070	.21	1900	1900	50	270	20	250
20...	67	.12	1.88	2.8	.040	.12	190	70	120	220	10	210
JAN												
24...	75	.13	2.36	2.4	.130	.40	2300	2200	70	200	20	180
FEB												
26...	68	.11	2.38	2.4	.380	1.2	1800	1700	70	260	0	260
MAR												
18...	68	.13	3.30	1.8	.110	.34	1900	1600	270	250	40	210
APR												
22...	65	.11	1.91	2.0	.060	.25	1500	850	550	220	40	190
MAY												
28...	62	.12	1.56	--	.070	.21	1800	1800	40	190	10	180
JUN												
25...	61	.12	1.33	2.2	.110	.34	2200	2200	40	160	40	120
JUL												
29...	68	.09	1.03	1.4	.060	.18	1600	1100	470	210	20	190
SEP												
09...	59	.10	.75	1.7	.070	.21	1400	850	550	240	0	240

01495000 BIG ELK CREEK AT ELK MILLS, MD

LOCATION.--Lat 39°39'26", long 75°49'20", Cecil County, Hydrologic Unit 02060002, on right bank 100 ft (30 m) downstream from highway bridge at Elk Mills, 3.5 mi (5.6 km) north of Elkton, and 7 mi (11 km) upstream from confluence with Little Elk Creek.

DRAINAGE AREA.--52.6 mi² (136.2 km²).

PERIOD OF RECORD.--April 1932 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1932-33, 1934(M), 1935, 1936(M), 1938, 1939-40(M), 1942(M), 1943-51, 1952-53(P).

GAGE.--Water-stage recorder. Datum of gage is 68.5 ft (20.88 m) National Geodetic Vertical Datum of 1929. Apr. 10, 1932, to May 16, 1946, nonrecording gage at bridge 100 ft (30 m) upstream at same datum.

REMARKS.--Records good. Slight diurnal fluctuation caused by mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--48 years, 70.2 ft³/s (1.988 m³/s), 18.12 in/yr (460 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s (300 m³/s) July 5, 1937, gage height, 14.5 ft (4.42 m), from floodmarks, from rating curve extended above 1,700 ft³/s (48.1 m³/s) on basis of velocity-area and conveyance studies; minimum, 4.5 ft³/s (0.13 m³/s) Jan. 21, 1955, (result of freezeup); minimum daily, 4.8 ft³/s (0.14 m³/s) Sept. 8-10, 1966; minimum gage height observed, 2.09 ft (0.637 m) Sept. 19, 22-24, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 19 ft (5.8 m) in June 1884, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 853 ft³/s (24.2 m³/s) Mar. 21, gage height, 4.98 ft (1.518 m), no peak above base of 1,700 ft³/s (48 m³/s); minimum, 14 ft³/s (0.40 m³/s) Sept. 10, 12, 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	61	81	57	52	54	277	245	62	46	29	25
2	92	61	76	57	52	54	131	120	56	41	33	18
3	175	245	73	56	51	54	103	104	54	40	20	16
4	71	99	73	55	51	57	129	86	52	42	25	16
5	162	76	73	57	50	68	99	79	47	39	25	17
6	135	71	74	56	50	68	85	74	45	37	23	19
7	74	68	89	54	50	57	80	73	51	33	22	17
8	64	65	73	53	49	69	78	84	109	33	21	15
9	62	64	68	53	49	89	123	74	61	35	21	15
10	388	147	68	57	49	66	115	68	62	36	20	16
11	141	106	68	89	49	91	85	67	56	34	31	16
12	101	153	68	219	48	62	78	73	49	31	37	15
13	107	91	93	76	48	85	75	120	46	30	26	15
14	80	87	98	68	48	249	81	76	46	29	22	15
15	72	78	72	72	48	134	105	65	49	28	22	17
16	69	76	70	61	60	117	80	60	94	31	24	16
17	67	72	70	58	85	107	72	59	56	60	20	17
18	64	70	66	76	84	149	70	95	48	35	20	27
19	61	68	63	156	65	91	68	81	46	31	31	21
20	61	68	61	60	60	80	66	69	44	30	25	18
21	61	66	62	69	54	319	64	86	42	29	21	19
22	59	65	63	78	73	153	61	75	41	91	20	19
23	61	64	65	82	74	89	60	62	39	76	21	17
24	153	64	66	64	68	81	59	58	39	92	25	16
25	73	64	177	62	63	141	60	57	39	34	19	20
26	64	253	90	60	59	86	59	52	38	30	18	24
27	61	143	72	59	54	74	80	49	38	28	17	19
28	66	87	66	58	54	69	212	49	37	27	17	17
29	73	86	64	57	54	207	259	49	54	29	17	17
30	62	82	63	55	---	125	135	51	92	28	17	18
31	61	---	60	54	---	354	---	54	---	25	26	---
TOTAL	3001	2802	2325	2196	1651	3499	3049	2414	1592	1210	715	537
MEAN	96.8	93.4	75.0	70.8	56.9	113	102	77.9	53.1	39.0	23.2	17.9
MAX	388	253	177	219	85	354	277	245	109	92	37	27
MIN	59	61	60	53	48	54	59	49	37	25	17	15
CFSM	1.84	1.78	1.43	1.35	1.08	2.15	1.94	1.48	1.01	.74	.44	.34
IN.	2.12	1.98	1.64	1.55	1.17	2.47	2.16	1.71	1.13	.86	.51	.38

CAL YR 1979 TOTAL 37420 MEAN 103 MAX 2060 MIN 20 CFSM 1.96 IN 26.46
WTR YR 1980 TOTAL 24994 MEAN 68.3 MAX 388 MIN 15 CFSM 1.30 IN 17.64

01495800 LONG CREEK NEAR CHESAPEAKE CITY, MD

LOCATION.--Lat 39°33'15", long 75°47'18", Cecil County, Hydrologic Unit 02060002, on left bank, 10 ft (3 m) downstream from culvert on farm road, 2.0 mi (3.2 km) northeast of Chesapeake City, and 3.4 mi (5.5 km) upstream from mouth.

DRAINAGE AREA.--4.36 mi² (11.3 km²).

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 17 ft (5 m), from topographic map.

REMARKS.--Records fair prior to October 1979 and good thereafter, except those below 0.20 ft³/s (0.006 m³/s), which are fair. Several observations of water temperature were made during the period October 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 245 ft³/s (6.94 m³/s) Feb. 25, 1979, gage height, 4.12 ft (1.256 m); minimum daily, 0.12 ft³/s (0.003 m³/s) Sept. 2, 3, 20, 21, 23, 24, 1980.

EXTREMES FOR PERIOD OCTOBER 1978 TO SEPTEMBER 1980.--Peak discharges above base of 70 ft³/s (1.9 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 2, 1979	1945	75	2.12	3.04	0.927
Jan. 8, 1979	0415	92	2.61	3.17	0.966
Jan. 21, 1979	0615	187	5.30	3.79	1.155
Jan. 24, 1979	2100	93	2.63	3.18	0.969
Nov. 26, 1979	1830	*119	3.37	3.38	1.030
June 8, 1980	1015	119	3.37	3.38	1.030

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 25, 1979	Unknown	*245	6.94	4.12	1.256
Feb. 26, 1979	Unknown	204	5.78	3.89	1.186
Aug. 3, 1979	2115	95	2.69	3.19	0.972
Sept. 6, 1979	0915	76	2.15	3.05	0.930
June 16, 1980	0045	80	2.27	3.08	0.939

Water year 1979: Minimum daily discharge 0.21 ft³/s (0.006 m³/s) Oct. 14, 15, 1978.

Water year 1980: Minimum daily discharge 0.12 ft³/s (0.003 m³/s) Sept. 2, 3, 20, 21, 23, 24, 1980.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.92	.58	2.5	11	7.2	15	1.7	3.6	12	6.2	.43	1.8
2	.64	.61	1.5	44	6.6	12	2.0	2.9	7.4	2.1	.53	1.4
3	.50	.66	1.3	38	5.4	10	2.4	2.6	7.7	1.5	15	1.1
4	.50	.75	9.1	12	4.8	9.0	2.7	2.3	38	1.5	29	.93
5	.50	.74	18	7.7	4.6	13	3.0	2.8	13	1.8	3.3	1.3
6	.66	.69	7.3	7.2	4.5	33	3.5	2.3	5.6	1.4	1.6	40
7	.54	.55	4.2	18	4.2	18	2.7	2.0	3.1	1.2	1.1	8.8
8	.40	.50	3.2	74	3.9	12	2.0	1.8	2.2	.98	.86	2.3
9	.29	.56	25	29	3.8	8.8	1.7	1.6	1.7	.79	.76	1.3
10	.29	.61	25	13	3.7	8.9	3.5	1.5	1.5	.74	.65	.95
11	.29	.59	9.2	8.1	3.3	20	9.5	1.4	11	.77	.87	.78
12	.29	.58	6.1	5.9	3.2	12	6.0	1.3	8.0	.72	3.5	.71
13	.25	.65	4.8	7.8	3.0	8.2	4.0	4.9	2.6	.66	4.2	.63
14	.21	.60	4.1	18	2.8	7.9	4.5	7.7	1.7	.70	1.6	.55
15	.21	.50	3.3	15	2.9	6.3	7.0	3.6	1.5	.65	1.2	.59
16	.25	.68	3.0	7.1	3.0	3.2	11	2.2	1.3	.57	.97	.53
17	.70	.90	2.9	6.1	2.8	3.9	5.0	1.6	1.2	.57	.79	.48
18	.50	1.8	2.6	5.2	2.9	5.4	4.2	1.4	1.1	.50	.70	.44
19	.50	1.3	2.4	3.8	2.7	3.0	3.6	1.6	.89	.49	.85	.45
20	.50	.86	2.4	11	2.2	2.2	3.1	1.6	.74	.48	.79	.41
21	.43	.68	7.9	138	2.2	2.1	2.7	1.4	.67	.52	.77	.53
22	.36	.62	6.1	45	2.2	2.0	2.5	1.4	1.2	.52	.77	11
23	.34	.57	4.5	18	2.1	1.9	2.5	1.9	1.6	2.3	.69	11
24	.38	.63	7.5	46	6.8	2.1	2.3	6.6	1.3	1.3	.67	2.8
25	.38	.53	46	53	158	3.0	3.9	12	.89	.79	.68	1.5
26	.33	.46	15	20	157	4.8	8.2	5.7	.81	.72	.84	1.3
27	.41	1.2	9.1	13	50	3.0	27	2.6	.74	.66	7.0	1.0
28	.44	2.3	5.9	12	22	2.2	11	1.8	.67	.57	22	.82
29	.47	2.4	4.1	14	---	2.0	7.2	1.8	.67	.45	3.6	1.2
30	.53	4.8	3.5	10	---	1.9	4.8	1.6	1.6	.47	7.8	12
31	.55	---	4.5	8.2	---	1.8	---	1.4	---	.45	4.0	---
TOTAL	13.56	28.90	252.0	719.1	477.8	238.6	155.2	88.9	132.38	33.07	117.52	108.60
MEAN	.44	.96	8.13	23.2	17.1	7.70	5.17	2.87	4.41	1.07	3.79	3.62
MAX	.92	4.8	46	138	158	33	27	12	38	6.2	29	40
MIN	.21	.46	1.3	3.8	2.1	1.8	1.7	1.3	.67	.45	.43	.41
CFSM	.10	.22	1.87	5.32	3.92	1.77	1.19	.66	1.01	.25	.87	.83
IN.	.12	.25	2.15	6.13	4.08	2.04	1.32	.76	1.13	.28	1.00	.93

WTR YR 1979 TOTAL 2365.63 MEAN 6.48 MAX 158 MIN .21 CFSM 1.49 IN 20.18

01495800 LONG CREEK NEAR CHESAPEAKE CITY, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	1.3	2.4	1.0	2.7	2.3	31	39	1.8	2.9	.24	.14
2	18	1.3	2.0	.93	2.3	2.2	15	15	1.4	1.7	.24	.12
3	9.9	10	1.6	.87	2.1	2.2	10	10	1.4	1.4	.50	.12
4	4.8	8.0	1.5	.76	2.2	2.4	21	6.8	1.4	1.3	.38	.13
5	2.7	4.2	1.4	.87	2.2	4.6	14	4.9	1.2	1.1	.24	.15
6	2.2	2.6	1.8	.85	2.2	6.5	8.6	3.8	1.1	.82	.19	.18
7	1.8	2.3	5.0	.81	2.3	4.2	6.3	3.3	6.3	.67	.15	.17
8	1.5	2.0	2.7	1.1	2.4	3.8	5.4	4.7	49	.62	.14	.16
9	1.6	1.9	1.7	1.1	2.5	6.7	15	4.3	14	.65	.13	.17
10	31	2.4	1.5	.82	2.6	5.0	23	3.1	7.0	.60	.13	.16
11	24	5.1	1.3	10	2.3	6.9	11	2.7	4.0	.54	.19	.17
12	11	16	1.2	38	2.5	5.6	7.1	2.8	2.4	.48	.22	.17
13	11	8.3	4.0	14	2.2	25	5.5	3.3	1.8	.42	.20	.19
14	6.3	6.5	6.2	9.2	2.3	31	5.9	2.6	1.5	.35	.19	.21
15	3.7	4.6	2.7	7.4	2.6	12	11	2.1	6.5	.32	.20	.21
16	2.7	3.5	1.9	5.6	5.1	7.4	7.1	1.7	43	.73	.21	.21
17	2.1	2.6	1.9	5.1	4.9	8.3	5.1	1.6	12	.74	.19	.21
18	1.9	2.2	1.3	10	2.8	10	4.1	5.8	4.5	.55	.19	.59
19	1.8	2.1	1.1	30	2.7	6.3	3.6	5.9	2.6	.47	.51	.14
20	1.6	2.0	1.1	14	2.9	5.2	3.6	3.9	1.9	.45	.41	.12
21	1.5	1.8	.96	9.5	3.3	30	3.1	6.1	1.5	.35	.29	.12
22	1.5	1.8	1.2	9.3	6.8	18	2.6	5.1	1.3	.36	.21	.13
23	1.4	1.8	1.4	15	15	9.2	2.4	3.0	1.1	.77	.20	.12
24	4.4	1.7	1.3	8.9	8.6	12	2.2	2.3	.98	.62	.17	.12
25	3.3	1.6	12	6.7	6.1	23	2.3	2.1	.98	.46	.17	.26
26	2.2	52	6.4	5.8	4.9	11	2.3	1.7	.98	.37	.17	.26
27	1.8	43	2.7	5.0	3.9	7.4	9.0	1.5	.94	.30	.15	.17
28	1.7	12	1.8	4.9	3.3	6.7	20	1.3	1.2	.29	.15	.17
29	1.7	5.7	1.4	4.7	2.9	49	34	1.3	10	.33	.14	.17
30	1.6	3.3	1.3	4.1	---	24	18	1.3	11	.32	.13	.17
31	1.4	---	1.1	3.2	---	38	---	2.0	---	.28	.15	---
TOTAL	186.1	213.6	75.86	229.51	108.6	385.9	309.2	155.0	194.78	21.26	6.78	5.41
MEAN	6.00	7.12	2.45	7.40	3.74	12.4	10.3	5.00	6.49	.69	.22	.18
MAX	31	52	12	38	15	49	34	39	49	2.9	.51	.59
MIN	1.4	1.3	.96	.76	2.1	2.2	2.2	1.3	.94	.28	.13	.12
CFSM	1.38	1.63	.56	1.70	.86	2.84	2.36	1.15	1.49	.16	.05	.04
IN.	1.59	1.82	.65	1.96	.93	3.29	2.64	1.32	1.66	.18	.06	.05

CAL YR 1979 TOTAL 2546.73 MEAN 6.98 MAX 158 MIN .41 CFSM 1.60 IN 21.72
WTR YR 1980 TOTAL 1892.00 MEAN 5.17 MAX 52 MIN .12 CFSM 1.19 IN 16.14

01496000 NORTHEAST CREEK AT LESLIE, MD

LOCATION.--Lat 39°37'38", long 75°56'40", Cecil County, Hydrologic Unit 02060002, on left bank at downstream side of highway bridge, 0.7 mi (1.1 km) northeast of Leslie, 1.5 mi (2.4 km) southeast of Bay View, and 1.7 mi (2.7 km) upstream from confluence with Little Northeast Creek.

DRAINAGE AREA.--24.3 mi² (62.9 km²).

PERIOD OF RECORD.--October 1948 to current year.

REVISED RECORDS.--WSP 1232: 1949-51. WDR MD-DE-79-1: 1979.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 115.0 ft (35.05 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Slight diurnal fluctuation at low flow caused by powerplant above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years, 36.3 ft³/s (1.028 m³/s), 20.29 in/yr (515 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,800 ft³/s (136 m³/s) June 22, 1972, gage height, 8.41 ft (2.563 m), from rating curve extended above 2,300 ft³/s (65.1 m³/s) on basis of contracted-opening measurement at gage height 7.74 ft (2.359 m); minimum, 1.2 ft³/s (0.034 m³/s) Sept. 8, 9, 10, 11, 12, 13, 14, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 689 ft³/s (19.5 m³/s) Mar. 21, gage height, 3.62 ft (1.103 m), no peak above base of 800 ft³/s (22 m³/s); minimum daily, 3.3 ft³/s (0.093 m³/s) Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	21	26	22	21	18	288	280	22	18	10	5.0
2	49	22	25	22	21	18	61	66	19	15	10	4.2
3	165	250	24	21	19	18	41	55	18	15	9.8	4.0
4	38	50	25	21	18	18	77	39	18	16	9.8	3.8
5	110	32	24	21	18	27	43	33	16	14	10	4.1
6	94	28	25	21	18	28	32	30	16	13	9.7	5.1
7	32	27	35	22	17	22	30	29	20	12	9.5	4.2
8	25	25	26	21	17	31	28	36	55	12	8.8	4.8
9	28	24	23	20	17	44	105	31	23	12	7.6	3.8
10	426	125	23	20	18	27	107	27	24	11	7.2	4.3
11	105	60	23	62	18	37	38	26	21	11	7.6	3.7
12	49	135	22	197	18	23	32	28	18	10	11	3.4
13	62	43	49	34	18	45	30	74	16	9.8	8.7	3.4
14	33	41	50	30	17	282	32	33	16	9.5	7.3	3.4
15	27	32	27	29	17	102	56	26	20	9.2	7.3	3.7
16	24	30	25	25	22	56	33	24	60	9.6	7.9	3.4
17	24	27	25	24	20	60	28	22	23	12	6.4	3.3
18	23	26	21	44	18	129	26	51	18	10	6.4	6.0
19	22	25	21	170	17	42	25	40	18	9.3	8.9	5.4
20	21	25	21	40	17	32	24	29	16	9.1	8.1	4.0
21	21	25	21	31	18	363	24	40	15	11	6.5	4.2
22	21	24	22	25	32	157	22	34	14	41	6.2	4.2
23	21	24	23	46	33	44	21	25	13	57	6.5	4.0
24	111	24	24	28	28	38	21	23	13	30	6.3	3.9
25	30	24	189	26	24	110	21	23	14	14	5.9	4.6
26	24	227	46	25	22	43	21	21	13	12	5.1	5.2
27	22	111	30	23	19	34	33	19	13	11	4.7	4.4
28	24	38	26	24	18	31	265	18	13	11	4.6	4.2
29	27	32	24	24	18	260	219	18	33	11	4.5	4.1
30	22	28	24	22	---	87	144	18	109	11	4.3	4.0
31	21	---	23	21	---	313	---	19	---	10	4.2	---
TOTAL	1837	1605	992	1161	578	2539	1927	1237	707	456.5	230.8	125.8
MEAN	59.3	53.5	32.0	37.5	19.9	81.9	64.2	39.9	23.6	14.7	7.45	4.19
MAX	426	250	189	197	33	363	288	280	109	57	11	6.0
MIN	21	21	21	20	17	18	21	18	13	9.1	4.2	3.3
CFSM	2.44	2.20	1.32	1.54	.82	3.37	2.64	1.64	.97	.61	.31	.17
IN.	2.81	2.46	1.52	1.78	.88	3.89	2.95	1.89	1.08	.70	.35	.19

CAL YR 1979 TOTAL 21502.8 MEAN 58.9 MAX 1360 MIN 6.8 CFSM 2.42 IN 32.92
WTR YR 1980 TOTAL 13396.1 MEAN 36.6 MAX 426 MIN 3.3 CFSM 1.51 IN 20.51

01496200 PRINCIPIO CREEK NEAR PRINCIPIO FURNACE, MD

LOCATION.--Lat 39°37'34", long 76°02'27", Cecil County, Hydrologic Unit 02060002, on left bank, 55 ft (17 m) downstream from bridge on Belvedere Road, 3.5 mi (5.6 km) north of Principio Furnace, and 4.9 mi (7.9 km) upstream from mouth.

DRAINAGE AREA.--9.03 mi^2 (23.39 km^2).

PERIOD OF RECORD.--June 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 215 ft (65.5 m).

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 13.9 ft^3/s (0.394 m^3/s), 20.90 in/yr (531 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,060 ft^3/s (200 m^3/s) Aug. 4, 1969, gage height, 9.26 ft (2.822 m), from rating curve extended above 170 ft^3/s (4.81 m^3/s) on basis of slope-area measurements at gage heights 8.89 ft (2.710 m) and 9.26 ft (2.822 m); minimum, 1.3 ft^3/s (0.037 m^3/s) Sept. 12, 13, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 345 ft^3/s (9.77 m^3/s) Mar. 21, gage height, 4.31 ft (1.314 m), no other peak above base of 300 ft^3/s (8.4 m^3/s); minimum, 1.3 ft^3/s (0.037 m^3/s) Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	10	9.4	9.3	9.4	7.0	41	57	9.0	7.2	5.5	1.8
2	7.1	10	9.1	9.2	9.2	6.6	20	21	8.7	6.5	4.3	1.7
3	26	54	8.6	9.1	8.8	6.0	17	20	8.4	7.1	4.1	1.6
4	6.0	15	8.8	9.0	8.4	6.4	24	15	8.1	6.7	4.0	1.6
5	20	13	8.7	9.4	8.2	10	16	14	7.7	6.1	3.8	1.7
6	10	12	9.3	8.9	8.0	9.6	14	13	8.0	5.7	3.6	1.8
7	5.6	11	11	9.0	7.9	8.5	13	13	9.4	5.3	3.5	1.6
8	4.6	11	8.8	9.1	8.4	11	13	15	28	5.8	3.4	1.5
9	5.8	11	8.2	9.0	8.2	13	34	13	9.5	5.6	3.3	1.4
10	101	28	8.4	8.9	8.3	9.5	22	12	11	5.4	3.0	1.6
11	22	20	8.2	26	8.4	11	15	12	8.9	5.1	3.4	1.4
12	19	27	8.1	32	7.6	8.4	14	15	8.2	4.8	4.4	1.4
13	17	15	17	12	7.9	25	13	25	7.9	4.7	3.3	1.4
14	13	14	12	11	7.7	49	16	13	7.6	4.5	3.1	1.5
15	12	13	9.4	11	7.6	19	18	11	14	4.4	3.1	1.5
16	11	12	9.3	10	7.6	13	14	11	23	4.7	3.1	1.4
17	11	12	8.9	10	7.6	21	13	10	9.6	5.6	2.7	1.5
18	11	12	7.9	24	7.5	25	13	20	8.2	5.1	2.9	2.9
19	10	11	8.1	32	7.4	13	12	13	7.6	4.8	4.2	1.8
20	10	11	8.0	13	7.5	12	12	12	7.1	4.6	3.2	1.7
21	10	11	7.9	12	8.0	109	12	14	6.8	9.8	2.8	1.7
22	10	11	8.4	13	12	23	11	12	6.7	45	2.8	1.6
23	13	11	8.4	15	11	15	11	11	6.5	18	2.8	1.5
24	25	11	8.7	11	9.9	15	11	10	6.4	9.8	2.6	1.4
25	12	11	40	11	9.3	25	11	10	6.3	5.8	2.3	2.3
26	11	43	13	10	8.4	14	11	9.4	6.1	5.3	2.2	2.7
27	10	15	11	9.8	7.8	13	30	9.1	6.0	5.0	2.1	2.3
28	11	12	10	9.9	7.6	12	41	9.0	6.3	4.8	2.0	2.3
29	11	11	10	9.6	7.5	61	47	8.8	29	4.7	2.0	2.3
30	10	9.7	9.8	9.4	---	20	53	8.9	22	4.5	2.1	2.4
31	10	---	9.6	8.7	---	102	---	9.5	---	4.4	1.9	---
TOTAL	484.1	467.7	324.0	391.3	243.1	693.0	592	446.7	312.0	226.8	97.5	53.3
MEAN	15.6	15.6	10.5	12.6	8.38	22.4	19.7	14.4	10.4	7.32	3.15	1.78
MAX	101	54	40	32	12	109	53	57	29	45	5.5	2.9
MIN	4.6	9.7	7.9	8.7	7.4	6.0	11	8.8	6.0	4.4	1.9	1.4
CFSM	1.73	1.73	1.16	1.40	.93	2.48	2.18	1.60	1.15	.81	.35	.20
IN.	1.99	1.93	1.33	1.61	1.00	2.85	2.44	1.84	1.29	.93	.40	.22

CAL YR 1979 TOTAL 6334.8 MEAN 17.4 MAX 446 MIN 3.6 CFSM 1.93 IN 26.09
WTR YR 1980 TOTAL 4331.5 MEAN 11.8 MAX 109 MIN 1.4 CFSM 1.31 IN 17.84

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD

LOCATION.--Lat 39°39'31", long 76°10'28", Harford County, Hydrologic Unit 02050306, at downstream side of Conowingo Dam, 1 mi (1.6 km) southwest of Conowingo, and 9.9 mi (15.9 km) upstream from mouth.

DRAINAGE AREA.--27,100 mi² (70,190 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5.00 ft (1.524 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Conowingo Reservoir beginning October 1928, usable capacity, 55,070,000,000 gal (208.4 hm³); dead storage, 45,290,000,000 gal (171.4 hm³). Records do not include a small infrequent diversion above station to augment municipal supply of city of Baltimore. Records of diversion available from Baltimore Department of Public Works.

AVERAGE DISCHARGE.--13 years, 44,260 ft³/s (1,253 m³/s), 22.18 in/yr (563 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,130,000 ft³/s (32,000 m³/s) June 24, 1972, gage height, 36.83 ft (11.226 m); minimum, 144 ft³/s (4.08 m³/s) Mar. 2, 1969, gage height, 6.28 ft (1.914 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 240,000 ft³/s (6,800 m³/s) Mar. 23, gage height, 22.45 ft (6.843 m); minimum, 750 ft³/s (21.2 m³/s) Dec. 16, gage height, 7.28 ft (2.219 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40100	24100	91300	54600	17400	8970	181000	86300	12100	19700	13000	2460
2	56700	27100	76500	49800	950	904	207000	87600	25100	18100	2120	11400
3	53200	33100	69900	43700	946	13800	198000	79800	22800	20200	2860	7810
4	57900	59100	58200	47600	12200	11700	163000	67200	23200	3210	4940	5110
5	77600	66900	50500	34100	13300	11100	129000	67000	24600	12100	9410	3580
6	74200	70300	55300	5220	17000	17700	104000	60600	25100	7430	10000	2060
7	101000	73100	41700	33000	20700	17700	106000	56000	8680	19700	11000	1980
8	118000	61500	34100	29600	16400	7770	91000	48400	12700	21000	16900	2000
9	111000	51700	12000	28200	5460	1020	93300	45400	23800	14400	2460	8700
10	96300	45700	35100	26400	2960	21000	117000	26800	20900	18200	3110	6910
11	78600	21600	35200	22700	16700	42300	159000	21500	23800	19900	13400	9070
12	72700	44430	31300	12400	14800	53100	168000	43900	30500	2640	10000	8060
13	58300	39900	34000	9620	14200	48400	131000	49400	28200	2920	10400	1590
14	27900	40500	31500	27700	16400	48700	120000	55700	13400	18000	10900	1530
15	47200	34800	25900	28400	16500	35100	119000	53000	7910	16600	15400	3720
16	51200	34400	11800	31300	8830	10400	154000	53700	25100	15900	2310	3490
17	46100	23700	36600	33100	995	29700	154000	51700	21200	14900	1920	4960
18	38800	13400	32600	38000	8190	51900	128000	36600	20100	17000	19100	9400
19	33800	33800	28600	32200	12000	65500	94000	56600	20600	2920	9690	7390
20	23500	34100	24300	15100	9920	84000	79800	42700	22200	3550	13100	2100
21	16900	41200	27600	33700	13200	119000	76600	38700	838	18900	12800	1470
22	28700	1010	9620	29900	24000	173000	70400	54000	1140	19200	14400	17200
23	26500	25700	11000	28500	9080	215000	59900	45100	20800	8610	1570	7470
24	26100	24900	38900	30900	2350	202000	50800	37400	16500	7950	1640	1570
25	17700	7460	17000	25000	20900	161000	49500	30100	15500	12200	6580	3010
26	27600	42100	53500	11600	23600	146000	46300	22700	15000	2330	8230	2090
27	12100	65000	75900	5560	18400	139000	16000	27700	17300	2090	9320	1420
28	14100	101000	101000	16700	21800	116000	45000	26800	1360	8000	9550	1600
29	27000	173000	82100	22300	20200	98900	61800	27600	2300	9850	11600	1540
30	30800	133000	66700	18300	---	94200	70500	28800	22300	11900	2400	1420
31	24000	---	69600	17100	---	136000	---	12400	---	12700	1840	---
TOTAL	1515600	1447570	1369320	842300	378581	2180864	3242900	1441200	525028	382100	261950	142110
MEAN	48890	48250	44170	27170	13050	70350	108100	46490	17500	12330	8450	4737
MAX	118000	173000	101000	54600	24000	215000	207000	87600	30500	21000	19100	17200
MIN	12100	1010	9620	5220	946	904	16000	12400	838	2090	1570	1420
CFSM	1.80	1.78	1.63	1.00	.48	2.60	3.99	1.72	.65	.46	.31	.18
IN.	2.08	1.99	1.88	1.16	.52	2.99	4.45	1.98	.72	.52	.36	.20

CAL YR 1979 TOTAL 19091490 MEAN 52310 MAX 462000 MIN 1010 CFSM 1.93 IN 26.21
WTR YR 1980 TOTAL 13729523 MEAN 37510 MAX 215000 MIN 838 CFSM 1.38 IN 18.85

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1979 to current year.
WATER TEMPERATURES: June 1979 to current year.
SUSPENDED SEDIMENT: October 1979 to September 1980.

REMARKS.--Daily samples collected by a local observer.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 375 micromhos Sept. 3, 1980; minimum, 115 micromhos Apr. 3, 1980.
WATER TEMPERATURES: Maximum, 29.5°C Aug. 8, 1980; minimum, 1.0°C Feb. 5, 6, 9, 1980.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 116 mg/L Mar. 24, 1980; minimum daily mean, 2 mg/L on many days during winter periods.
SEDIMENT LOADS: Maximum daily, 63,300 tons (57,400 tonnes) Mar. 24, 1980; minimum daily, 7.7 tons (7.0 tonnes) Feb. 2, 3, 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 375 micromhos Sept. 3; minimum, 115 micromhos Apr. 3.
WATER TEMPERATURES: Maximum, 29.5°C Aug. 8; minimum, 1.0°C Feb. 5, 6, 9.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 116 mg/L Mar. 24; minimum daily mean, 2 mg/L on many days during winter periods.
SEDIMENT LOADS: Maximum daily, 63,300 tons (57,400 tonnes) Mar. 24; minimum daily, 7.7 tons (7.0 tonnes) Feb. 2, 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT												
03...	1230	73490	245	8.2	20.0	21.0	--	8.2	--	--	--	--
12...	1230	79600	188	8.0	17.0	14.0	--	10.2	--	--	--	--
16...	1030	72800	195	7.9	13.0	13.0	8.0	10.0	230	63	73	41
31...	1200	66000	252	8.2	14.0	14.5	4.0	8.9	--	--	96	51
NOV												
03...	0700	908	240	8.2	9.5	14.0	--	9.9	--	--	--	--
13...	1200	71400	200	7.1	8.5	10.0	1.0	10.7	K84	240	76	43
29...	1245	180200	185	8.1	5.0	13.5	--	11.3	--	--	--	--
30...	1130	14400	150	--	8.0	10.0	--	12.3	--	--	--	--
30...	1230	12400	142	--	8.0	9.0	--	12.3	--	--	--	--
DEC												
01...	1100	100000	160	8.0	4.0	8.0	--	--	--	--	53	--
01...	1200	105000	150	7.8	4.0	8.0	--	12.2	--	--	56	28
11...	1145	66400	190	7.7	9.0	4.5	2.0	12.7	20	K4	72	38
JAN												
03...	1100	74000	157	7.4	6.0	4.0	--	12.8	--	--	61	27
15...	1030	60100	209	8.1	8.5	1.5	.80	13.6	90	360	80	42
29...	1100	60500	235	7.2	1.0	3.0	--	12.8	--	--	90	48
FEB												
12...	1130	59200	185	7.2	1.1	1.5	1.5	14.3	K1	K5	96	51
15...	0650	23000	278	7.7	2.0	2.9	--	13.9	--	--	100	56
15...	0920	59700	278	7.9	2.0	2.6	--	14.1	--	--	100	54
15...	1750	45600	288	8.0	2.0	2.8	--	14.5	--	--	110	57
15...	1855	24200	256	7.8	3.0	2.8	--	14.5	--	--	110	55
27...	1030	59500	320	7.0	2.0	3.5	--	13.9	--	--	120	61
MAR												
10...	1000	48000	175	8.0	9.0	5.5	4.0	13.8	<1	<1	110	62
20...	1130	85000	235	7.5	11.0	7.0	--	--	--	--	76	48
21...	0615	104000	199	7.8	13.0	7.0	--	11.6	--	--	73	45
21...	0630	105000	180	7.8	13.0	--	--	--	--	--	78	44
22...	1205	191000	170	7.3	8.0	8.0	--	11.8	--	--	56	31
22...	1500	175000	165	6.8	8.0	8.0	--	12.0	--	--	54	30
23...	1400	222000	134	--	11.0	--	--	--	--	--	46	26
23...	1405	222000	129	--	11.0	--	--	--	--	--	46	27
23...	1700	203000	--	--	9.0	5.5	30	13.0	--	--	51	21
23...	2000	223000	128	--	7.0	5.5	100	13.4	--	--	46	27
24...	1230	222000	114	--	8.5	6.5	50	13.6	--	--	39	17
APR												
02...	1200	227000	135	--	17.0	9.0	2.0	--	--	--	50	32
02...	1500	207000	133	7.5	15.0	9.0	15	12.8	--	--	50	30
02...	1730	208000	--	7.6	11.0	9.0	13	12.5	--	--	50	30
02...	2000	224000	135	7.6	10.0	9.0	18	12.4	--	--	49	29
03...	1100	222000	127	6.7	16.5	9.0	1.0	12.9	--	--	49	33
03...	1400	205000	132	6.6	13.5	9.0	3.0	12.7	--	--	50	25
10...	1230	140000	--	--	--	--	--	--	--	--	--	--

K Results based on colony count outside the acceptable range (non-ideal colony count).

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
APR												
11...	1200	176000	150	7.6	20.0	12.0	5.6	11.0	--	--	58	26
11...	1900	159000	152	7.0	--	12.5	.80	11.2	--	--	57	23
12...	1200	171000	133	7.4	24.0	12.0	2.5	11.4	--	--	54	26
14...	1130	141000	144	7.6	10.0	12.0	.80	11.6	240	200	49	29
16...	1700	158000	150	--	--	10.0	4.4	--	--	--	57	23
20...	1100	73300	185	7.7	13.5	13.5	4.2	9.6	--	--	68	29
MAY												
02...	1100	87700	190	7.6	19.5	14.0	15	--	--	--	79	43
02...	1600	87700	180	7.5	22.0	14.0	14	--	--	--	79	45
06...	1030	80100	155	7.4	32.0	15.0	6.4	9.6	--	--	63	29
09...	0930	70200	165	7.7	22.0	17.5	3.3	9.0	--	--	66	40
30...	1030	58200	190	8.0	22.5	21.5	1.1	8.6	--	--	81	43
JUN												
16...	1000	37100	246	7.9	15.5	15.5	1.3	6.0	--	--	99	54
JUL												
01...	1100	51900	265	7.7	--	25.0	--	--	--	--	110	60
09...	1030	21900	290	7.8	--	26.5	--	--	--	--	110	51
15...	1000	844	295	--	--	27.0	5.0	4.8	K5	K8	120	59
AUG												
12...	1400	39900	300	7.8	28.0	28.5	3.0	4.2	K2	K2	130	64
13...	1230	33000	274	8.4	--	--	--	--	--	--	110	60
29...	1215	25100	--	--	28.5	28.5	--	4.2	--	--	140	82
SEP												
16...	1030	11900	330	7.7	23.5	26.5	.20	4.9	3500	--	150	90
29...	1345	4330	340	7.7	22.5	23.5	--	5.0	--	--	150	94

K Results based on colony count outside the acceptable range (non-ideal colony count).

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT												
03...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
16...	20	5.6	4.7	16	.2	1.8	32	34	7.5	.1	5.9	--
31...	25	8.1	8.2	22	.4	2.0	45	45	10	.1	3.3	147
NOV												
03...	--	--	--	--	--	--	--	--	--	--	--	--
13...	21	5.7	6.2	20	.3	1.6	33	33	9.0	.1	4.9	119
29...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
01...	15	3.8	3.8	13	.2	1.8	26	28	6.2	.1	4.4	--
01...	16	4.0	4.1	17	.2	1.7	28	29	6.3	.1	4.1	--
11...	20	5.4	5.0	17	.3	1.3	34	33	7.2	.1	5.4	122
JAN												
03...	17	4.6	4.6	18	.3	1.5	34	29	6.8	.1	5.0	--
15...	22	6.0	5.7	18	.3	1.6	38	39	8.4	.1	4.6	111
29...	25	6.8	7.6	15	.3	1.4	42	42	11	.1	3.8	--
FEB												
12...	26	7.5	8.3	16	.4	1.5	45	43	12	.2	3.3	145
15...	28	8.2	9.8	17	.4	1.6	48	51	13	.1	2.7	--
15...	28	8.1	9.3	16	.4	1.5	49	50	13	.1	2.8	--
15...	30	8.4	10	16	.4	1.6	53	52	14	.1	2.5	--
15...	29	8.2	9.7	16	.4	1.6	51	50	13	.1	2.6	--
27...	32	9.6	10	15	.4	1.6	58	56	14	.1	1.4	--
MAR												
10...	30	9.0	10	16	.4	1.6	50	54	16	.1	.8	177
20...	21	5.7	9.2	20	.5	2.1	28	36	14	.1	3.1	--
21...	20	5.7	8.4	19	.4	2.1	28	34	12	.1	2.7	--
21...	19	5.4	7.7	19	.4	2.0	26	32	12	.1	2.9	--
22...	16	3.9	6.9	20	.4	1.9	25	24	11	.1	3.6	--
22...	15	3.9	6.5	20	.4	1.9	24	23	10	.1	3.7	--
23...	13	3.4	5.0	18	.3	1.8	20	20	8.8	.1	4.0	--
23...	13	3.4	4.7	17	.3	1.8	19	19	8.2	.1	4.1	--
23...	14	3.9	4.5	16	.3	1.7	30	20	8.0	.1	4.2	93
23...	13	3.3	4.4	17	.3	1.7	19	20	7.8	.1	4.1	66
24...	11	2.9	4.3	18	.3	1.6	22	17	6.2	.1	4.2	81
APR												
02...	14	3.6	4.3	15	.3	1.4	18	23	6.8	.1	4.9	99
02...	14	3.6	4.4	16	.3	1.4	20	23	6.8	.1	4.8	87
02...	14	3.6	4.2	15	.3	1.4	20	23	6.6	.1	4.9	89
02...	14	3.5	4.2	15	.3	1.4	20	24	6.5	.1	4.7	64
03...	14	3.5	3.5	13	.2	1.3	16	20	6.2	.1	4.9	88
03...	14	3.6	5.1	18	.3	1.3	25	19	5.8	.1	6.0	82
10...	--	--	--	--	--	--	35	--	--	--	--	--
11...	16	4.4	4.8	15	.3	1.3	32	27	6.8	.1	4.9	110
11...	16	4.1	4.5	14	.3	1.4	34	26	6.4	.1	4.9	105
12...	15	4.0	4.2	14	.2	1.3	28	25	5.8	.1	5.0	99
14...	14	3.5	3.9	14	.2	1.3	20	24	5.7	.1	4.6	90
16...	16	4.1	3.9	13	.2	1.3	34	24	5.5	.1	5.0	84
28...	19	4.9	4.5	12	.2	1.4	39	32	7.3	.1	4.2	113
MAY												
02...	22	5.9	5.6	13	.3	1.4	36	33	8.2	.1	3.9	125
02...	22	5.8	5.5	13	.3	1.5	34	35	8.4	.1	4.1	138
06...	18	4.5	4.6	13	.3	1.3	34	26	6.9	.1	4.7	107
09...	18	5.1	5.2	14	.3	1.2	26	29	6.9	.1	3.9	114
30...	22	6.4	6.4	14	.3	1.3	38	35	7.7	.1	2.7	131
JUN												
16...	27	7.7	7.2	13	.3	1.6	45	45	11	.1	1.2	152
JUL												
01...	29	8.6	8.0	14	.3	1.8	48	54	11	.1	2.2	--
09...	29	10	13	20	.5	2.3	63	57	14	.2	1.9	--
15...	32	9.8	11	16	.4	2.3	61	53	14	.1	2.1	215
AUG												
12...	35	9.8	10	14	.4	2.4	64	63	14	.2	2.0	202
13...	31	9.1	9.9	15	.4	2.2	55	51	13	.1	2.1	--
29...	38	12	12	15	.4	2.5	62	75	17	.2	2.1	--
SEP												
16...	38	13	13	16	.5	2.6	58	72	18	.2	1.6	216
29...	39	12	14	15	.5	23	53	73	19	.2	1.4	--

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT												
03...	--	--	--	159	1.8	1.8	7.9	.06	.02	.07	1.9	1.8
12...	--	--	--	141	1.3	1.3	5.7	.03	.02	.07	1.3	1.3
16...	106	.08	20800	--	1.4	1.4	6.2	.02	.01	.03	1.4	1.4
31...	135	.20	26200	--	1.4	1.4	6.0	.03	.05	.16	1.4	1.4
NOV												
03...	--	--	--	157	1.4	1.3	5.6	.04	.04	.13	1.4	1.3
13...	108	.16	22900	--	1.1	--	--	.01	.01	.03	1.1	--
29...	--	--	--	146	1.2	1.1	4.8	.02	.01	.03	1.2	1.1
30...	--	--	--	138	--	--	--	--	--	--	1.1	1.1
30...	--	--	--	138	.97	.99	4.4	.02	.01	.03	.99	1.0
DEC												
01...	--	--	--	127	.97	.89	3.9	.13	.11	.36	1.1	1.0
01...	87	.12	24700	151	.98	.99	4.4	.02	.01	.03	1.0	1.0
11...	104	.17	21900	--	1.2	1.2	5.3	.01	.01	.03	1.2	1.2
JAN												
03...	94	.13	18800	121	1.1	1.1	4.8	.00	.02	.07	1.1	1.1
15...	116	.15	18000	--	1.2	1.3	5.7	.01	.01	.03	1.2	1.3
29...	124	.17	20300	148	1.4	--	--	.02	--	--	1.4	--
FEB												
12...	136	.20	23200	--	1.7	1.6	7.0	.03	.02	.07	1.7	1.6
15...	151	.21	9380	169	1.6	1.6	7.0	.02	.03	.10	1.6	1.6
15...	149	.20	24000	167	1.6	1.5	6.6	.02	.02	.07	1.6	1.5
15...	158	.21	19500	170	1.7	1.6	7.0	.02	.02	.07	1.7	1.6
15...	152	.21	9930	165	1.7	1.6	7.0	.02	.02	.07	1.7	1.6
27...	167	.23	26800	188	1.7	1.5	6.6	.02	.02	.07	1.7	1.5
MAR												
10...	159	.24	22900	--	1.5	1.5	6.5	.02	.03	.10	1.5	1.5
20...	114	.16	26200	125	1.3	1.3	5.7	.02	.02	.07	1.3	1.3
21...	109	.15	30600	144	1.4	1.5	6.6	.03	.02	.07	1.4	1.5
21...	104	.14	--	116	1.5	1.5	6.6	.03	.02	.07	1.5	1.5
22...	89	.12	45900	102	1.4	1.3	5.7	.02	.02	.07	1.4	1.3
22...	85	.12	40200	105	1.4	1.3	5.7	.02	.02	.07	1.4	1.3
23...	74	.10	44400	107	1.6	1.3	5.6	.04	.03	.10	1.6	1.3
23...	72	.10	43200	96	1.5	1.4	6.1	.03	.02	.07	1.5	1.4
23...	81	.13	51000	--	1.5	1.5	6.5	.04	.03	.10	1.5	1.5
23...	72	.09	39700	--	1.5	1.3	5.7	.03	.02	.07	1.5	1.3
24...	67	.11	48600	--	1.2	1.4	6.1	.01	.03	.10	1.2	1.4
APR												
02...	74	.13	60700	--	1.1	1.1	4.8	.01	.01	.03	1.1	1.1
02...	75	.12	48600	--	1.1	1.1	4.8	.01	.00	.03	1.1	1.1
02...	75	.12	50000	--	1.2	1.2	5.2	.01	.02	.07	1.2	1.2
02...	76	.09	38700	--	1.1	1.1	4.8	.01	.01	.03	1.1	1.1
03...	68	.12	52700	--	1.1	.99	4.4	.02	.01	.03	1.1	1.0
03...	74	.11	45400	--	1.1	1.0	4.4	.02	.00	.00	1.1	1.0
10...	--	--	--	105	--	--	--	.03	--	--	--	--
11...	91	.15	52300	--	1.2	1.3	5.7	.02	.02	.07	1.2	1.3
11...	90	.14	45100	--	1.2	1.3	5.7	.03	.02	.07	1.2	1.3
12...	83	.13	45700	--	1.2	1.2	5.2	.02	.02	.07	1.2	1.2
14...	74	.12	34300	--	1.1	1.1	4.8	.02	.01	.03	1.1	1.1
16...	85	.11	35800	--	.98	.99	4.4	.02	.01	.03	1.0	1.0
28...	102	.15	22400	--	1.1	1.1	4.7	.01	.03	.10	1.1	1.1
MAY												
02...	108	.17	29600	--	1.2	1.3	5.7	.02	.02	.07	1.2	1.3
02...	109	.19	32700	--	1.3	1.3	5.7	.02	.02	.07	1.3	1.3
06...	92	.15	23100	--	1.1	1.1	4.8	.02	.01	.03	1.1	1.1
09...	90	.16	21600	--	.99	1.1	4.8	.01	.01	.03	1.0	1.1
30...	110	.18	20600	--	.98	1.1	4.8	.02	.02	.07	1.0	1.1
JUN												
16...	133	.21	15200	--	1.1	--	--	.04	--	--	1.1	1.1
JUL												
01...	148	.20	20700	207	.95	.95	4.2	.05	.05	.16	1.0	.99
09...	170	.23	10100	193	1.2	--	--	.02	--	--	1.2	1.1
15...	167	.29	490	--	1.1	--	--	.00	--	--	1.1	1.1
AUG												
12...	179	.27	21800	--	.72	--	--	.00	.07	.26	.72	.70
13...	155	.21	13800	167	.12	--	--	.00	--	--	.12	--
29...	200	.27	13600	225	.72	.72	3.2	.04	.05	.16	.76	.77
SEP												
16...	197	.29	6940	--	.73	.74	3.3	.00	.03	.10	.73	.77
29...	217	.30	2540	258	.78	.72	3.2	.04	.10	.33	.82	.82

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)
OCT											
03...	.10	.09	.12	.12	.23	--	.33	.00	--	2.2	2.5
12...	.04	.01	.05	.01	.26	.33	.30	.00	.34	1.6	1.6
16...	.04	.00	.05	.00	.66	--	.70	.00	--	2.1	--
31...	.14	.12	.17	.15	.49	.17	.63	.34	.29	2.0	1.7
NOV											
03...	.06	.01	.07	.01	.71	.24	.77	.52	.25	2.2	1.6
13...	.08	.04	.10	.05	.16	--	.24	.00	--	1.3	--
29...	.04	.05	.05	.06	.54	.44	.58	.09	.49	1.8	1.6
30...	.15	--	.18	--	.40	--	.55	--	--	1.7	--
30...	.08	.03	.10	.04	.54	.53	.62	.06	.56	1.6	1.6
DEC											
01...	.01	.01	.01	.01	.43	.28	.44	.15	.29	1.5	1.3
01...	.03	.03	.04	.04	.51	.52	.54	.00	.55	1.5	1.6
11...	.07	.02	.08	.03	.29	.37	.36	.00	.39	1.6	1.6
JAN											
03...	.03	.00	.04	.00	.37	.50	.40	.00	.50	1.5	1.6
15...	.10	.09	.12	.12	.55	.51	.65	.05	.60	1.9	1.9
29...	.07	.06	.08	.08	.20	--	.27	--	--	1.7	--
FEB											
12...	.07	.09	.08	.12	.22	.07	.29	.13	.16	2.0	1.8
15...	.09	.10	.11	.13	.54	.41	.63	.12	.51	2.2	2.1
15...	.09	.09	.11	.12	.25	.27	.34	.00	.36	1.9	1.9
15...	.08	.08	.10	.10	.54	.46	.62	.08	.54	2.3	2.1
15...	.08	.07	.10	.09	.51	.28	.59	.24	.35	2.3	2.0
27...	.17	.08	.21	.10	.22	.31	.39	.00	.39	2.1	1.9
MAR											
18...	.05	.09	.06	.12	.23	--	.28	--	--	1.8	--
20...	.22	.22	.27	.28	.32	.32	.54	.00	.54	1.8	1.8
21...	.19	.21	.23	.27	.61	.40	.80	.19	.61	2.2	2.1
21...	.19	.17	.23	.22	.47	.32	.66	.17	.49	2.2	2.0
22...	.17	.12	.21	.15	.50	.48	.67	.07	.60	2.1	1.9
22...	.17	.16	.21	.21	.58	.35	.75	.24	.51	2.2	1.8
23...	.17	.13	.21	.17	.58	.24	.75	.38	.37	2.4	1.7
23...	.14	.12	.17	.15	.44	.15	.58	.31	.27	2.1	1.7
23...	.17	.16	.21	.21	.66	.34	.83	.33	.50	2.3	2.0
23...	.13	.13	.16	.17	.74	.35	.87	.39	.48	2.4	1.8
24...	.16	.03	.19	.04	.40	.29	.56	.24	.32	1.8	1.7
APR											
02...	.06	.04	.07	.05	.34	.15	.40	.21	.19	1.5	1.3
02...	.06	.04	.07	.05	.16	.08	.22	.10	.12	1.3	1.2
02...	.06	.01	.07	.01	.12	.29	.18	.00	.30	1.4	1.5
02...	.06	.05	.07	.06	.21	.19	.27	.03	.24	1.4	1.3
03...	.05	.02	.06	.03	.25	.17	.30	.11	.19	1.4	1.2
03...	.06	.03	.07	.04	.17	.07	.23	.13	.10	1.3	1.1
10...	.08	--	.10	--	--	--	--	--	--	--	--
11...	.07	.07	.08	.09	.12	.11	.19	.01	.18	1.4	1.5
11...	.06	.07	.07	.09	.18	.12	.24	.05	.19	1.4	1.5
12...	.06	.05	.07	.06	.05	.04	.11	.02	.09	1.3	1.3
14...	.05	.10	.06	.13	.40	.28	.45	.07	.38	1.6	1.5
16...	.04	.04	.05	.05	.32	.39	.36	.00	.43	1.4	1.4
28...	.09	.00	.11	.00	.38	.26	.47	.21	.26	1.6	1.4
MAY											
02...	.06	.06	.07	.08	.37	.47	.43	.00	.53	1.6	1.8
02...	.05	.06	.06	.08	.42	.33	.47	.08	.39	1.8	1.7
06...	.07	.05	.08	.06	.24	.28	.31	.00	.33	1.4	1.4
09...	.06	.02	.07	.03	.30	.04	.36	.30	.06	1.4	1.2
30...	.10	.07	.12	.09	.25	.22	.35	.06	.29	1.4	1.4
JUN											
16...	.34	--	.41	--	.23	--	.57	--	--	1.7	--
JUL											
01...	.20	.20	.24	.26	.35	.34	.55	.01	.54	1.6	1.5
09...	.01	.04	.01	.05	.39	.16	.40	.20	.20	1.6	1.3
15...	.22	.29	.27	.37	.10	.04	.32	.00	.33	1.4	1.4
AUG											
12...	.07	.10	.08	.13	.28	.17	.35	.08	.27	1.1	.97
13...	.05	.05	.06	.06	.26	.17	.31	.09	.22	.43	--
29...	.08	.09	.10	.12	.21	.21	.29	.00	.30	1.1	1.1
SEP											
16...	.03	.06	.04	.08	.26	.23	.29	.00	.29	1.0	1.1
29...	.00	.03	.00	.04	.27	.23	.27	.01	.26	1.1	1.1

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, SUS-PENDED RECOV. (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
OCT											
03...	9.9	.080	.12	.25	.030	.04	.04	.12	500	0	600
12...	7.1	.070	.09	.21	.030	.03	.03	.09	500	100	400
16...	9.3	.040	.06	.12	.030	.02	.04	.12	300	0	300
31...	9.0	.010	.00	.03	.040	.00	.01	.03	600	300	300
NOV											
03...	9.6	.050	.12	.15	.040	.04	.00	.00	600	100	500
13...	5.9	.030	.00	.09	.020	.00	--	--	600	0	600
29...	7.9	.090	.00	.28	.010	.00	.00	.00	700	400	300
30...	7.3	.070	.00	.21	.020	.00	--	--	800	500	300
30...	7.1	.070	.00	.21	.010	.00	.03	.09	800	600	200
DEC											
01...	6.8	.060	.00	.18	.010	.00	.02	.06	700	400	300
01...	6.8	.080	.00	.25	.010	.00	.02	.06	800	600	200
11...	6.9	.040	.09	.12	.020	.03	--	--	500	300	200
JAN											
03...	6.6	.030	.18	.09	.060	.06	.05	.15	600	400	200
15...	8.2	.040	.09	.12	.020	.03	.03	.09	200	100	100
29...	7.4	.050	.03	.15	.000	.01	.00	.00	200	100	100
FEB											
12...	8.8	.040	.06	.12	.030	.02	.01	.03	300	200	100
15...	9.9	.080	.09	.25	.030	.03	.00	.00	300	200	100
15...	8.6	.050	.15	.15	.020	.05	.04	.12	200	0	200
15...	10	.050	.09	.15	.020	.03	.03	.09	200	100	100
15...	10	.050	.09	.15	.030	.03	.03	.09	200	100	100
27...	9.3	.050	.15	.15	.030	.05	.05	.15	400	100	300
MAR											
10...	7.9	.040	.00	.12	.020	.00	.01	.03	300	100	200
20...	8.1	.080	.12	.25	.040	.04	.00	.00	600	400	200
21...	9.7	.110	.15	.34	.030	.05	.00	.00	600	500	100
21...	9.6	.090	.15	.28	.030	.05	.00	.00	800	600	200
22...	9.2	.120	.00	.37	.020	.00	.02	.06	1100	900	200
22...	9.5	.150	.03	.46	.030	.01	.04	.12	1200	1000	200
23...	10	.200	.03	.61	.030	.01	.00	.00	2200	2000	200
23...	9.2	.340	.03	1.0	.020	.01	.00	.00	2300	2200	100
23...	10	.180	.25	.55	.030	.08	.04	.12	2000	--	--
23...	11	.320	.03	.98	.020	.01	.00	.00	2400	2300	100
24...	7.8	.150	.18	.46	.010	.06	.00	.00	2000	1900	100
APR											
02...	6.6	.070	.00	.21	.010	.00	.00	.00	700	600	100
02...	5.8	.070	.00	.21	.010	.00	.00	.00	900	800	100
02...	6.1	.070	.00	.21	.010	.00	.00	.00	800	700	100
02...	6.1	.070	.00	.21	.010	.00	.00	.00	1100	1000	100
03...	6.2	.060	.03	.18	.020	.01	.01	.03	900	800	100
03...	5.9	.050	.03	.15	.020	.01	.01	.03	700	600	100
10...	--	--	.03	--	--	.01	--	--	--	--	--
11...	6.2	.080	.03	.25	.020	.01	.05	.15	700	600	100
11...	6.4	.090	.03	.28	.020	.01	.04	.12	800	700	100
12...	5.0	.070	.03	.21	.020	.01	.04	.12	1000	900	100
14...	6.9	.100	.03	.31	.020	.01	.02	.06	160	60	100
16...	6.0	.100	.06	.31	.020	.02	.00	.00	900	800	100
20...	7.0	.030	.00	.09	.010	.00	.04	.12	300	200	100
MAY											
02...	7.2	.030	.18	.09	.010	.06	.01	.03	400	300	100
02...	7.8	.060	.00	.18	.020	.00	.02	.06	500	500	0
06...	6.2	.050	.00	.15	.020	.00	.00	.00	500	400	100
09...	6.0	.040	.00	.12	.010	.00	.00	.00	300	300	0
30...	6.0	.040	.00	.12	.010	.00	.00	.00	300	100	200
JUN											
16...	7.4	.050	.06	.15	.010	.02	--	--	200	100	100
JUL											
01...	6.9	.050	.00	.15	.010	.00	.00	.00	400	200	200
09...	7.1	.040	.03	.12	.000	.01	.00	.00	200	200	0
15...	6.3	.040	.03	.12	.020	.01	.00	.00	300	200	100
AUG											
12...	4.7	.030	.03	.09	.030	.01	.03	.09	200	100	100
13...	1.9	.050	.06	.15	.010	.02	.00	.00	200	100	100
29...	4.6	.050	.00	.15	.040	.00	.00	.00	300	100	200
SEP											
16...	4.5	.010	.00	.03	.000	.00	.00	.00	200	100	100
29...	4.8	.040	.00	.12	.010	.00	.00	.00	300	200	100

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)
OCT									
16...	--	--	--	--	--	--	0	--	--
31...	--	--	--	--	--	--	0	--	--
NOV									
13...	--	--	--	--	--	--	0	--	--
DEC									
11...	0	0	0	0	0	30	0	0	0
JAN									
15...	--	--	--	--	--	--	0	--	--
FEB									
12...	--	--	--	--	--	--	0	--	--
MAR									
10...	0	0	0	50	0	40	0	0	2
23...	--	--	--	--	--	--	0	--	--
23...	--	--	--	--	--	--	0	--	--
24...	--	--	--	--	--	--	0	--	--
APR									
02...	--	--	--	--	--	--	0	--	--
02...	--	--	--	--	--	--	0	--	--
02...	--	--	--	--	--	--	0	--	--
02...	--	--	--	--	--	--	0	--	--
03...	--	--	--	--	--	--	0	--	--
03...	1	--	--	--	--	--	0	--	--
10...	--	--	--	--	--	--	0	--	--
11...	--	--	--	--	--	--	0	--	--
11...	--	--	--	--	--	--	0	--	--
12...	--	--	--	--	--	--	0	--	--
14...	--	--	--	--	--	--	0	--	--
16...	--	--	--	--	--	--	0	--	--
28...	--	--	--	--	--	--	0	--	--
MAY									
02...	--	--	--	--	--	--	0	--	--
02...	--	--	--	--	--	--	0	--	--
06...	--	--	--	--	--	--	0	--	--
09...	--	--	--	--	--	--	0	--	--
30...	--	--	--	--	--	--	0	--	--
JUN									
16...	0	0	0	50	0	50	0	0	0
JUL									
15...	--	--	--	--	--	--	0	--	--
AUG									
12...	--	--	--	--	--	--	0	--	--
SEP									
16...	1	0	1	100	100	0	0	0	0

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)
OCT								
16...	4	--	--	--	--	3	--	--
31...	--	--	--	--	--	3	--	--
NOV								
13...	0	--	--	--	--	3	--	--
DEC								
11...	10	10	1	0	1	2	0	2
JAN								
15...	10	--	--	--	--	3	--	--
FEB								
12...	6	--	--	--	--	4	--	--
MAR								
10...	10	10	0	0	2	2	0	2
23...	14	--	--	--	--	6	--	--
23...	13	--	--	--	--	8	--	--
24...	0	--	--	--	--	6	--	--
APR								
02...	4	--	--	--	--	4	--	--
02...	5	--	--	--	--	5	--	--
02...	5	--	--	--	--	3	--	--
02...	0	--	--	--	--	4	--	--
03...	8	--	--	--	--	5	--	--
03...	8	--	--	--	--	4	--	--
10...	20	--	1	--	--	0	--	--
11...	5	--	--	--	--	4	--	--
11...	3	--	--	--	--	5	--	--
12...	2	--	--	--	--	5	--	--
14...	6	--	--	--	--	5	--	--
16...	2	--	--	--	--	3	--	--
28...	4	--	--	--	--	3	--	--
MAY								
02...	9	--	--	--	--	3	--	--
02...	4	--	--	--	--	4	--	--
06...	9	--	--	--	--	2	--	--
09...	1	--	--	--	--	1	--	--
30...	3	--	--	--	--	5	--	--
JUN								
16...	20	10	0	0	0	3	0	3
JUL								
15...	8	--	--	--	--	3	--	--
AUG								
12...	12	--	--	--	--	3	--	--
SEP								
16...	20	10	0	0	0	2	0	2

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT									
03...	950	920	30	--	--	--	120	120	0
12...	940	890	50	--	--	--	110	70	40
16...	790	720	70	5	--	--	130	40	90
31...	540	510	30	7	--	--	110	100	10
NOV									
03...	520	500	20	--	--	--	90	90	0
13...	730	620	110	1800	--	--	140	50	90
29...	1400	1400	20	--	--	--	200	110	90
30...	2100	2000	80	--	--	--	240	100	140
30...	2200	2200	10	--	--	--	230	100	130
DEC									
01...	2000	2000	10	--	--	--	170	100	70
01...	2800	2800	30	--	--	--	160	120	40
11...	620	440	180	3	3	0	160	10	150
JAN									
03...	1100	1000	60	--	--	--	150	20	130
15...	400	260	140	2	--	--	160	0	160
29...	500	370	130	--	--	--	190	0	200
FEB									
12...	400	320	80	2	--	--	180	10	170
15...	380	320	60	--	--	--	180	0	180
15...	380	310	70	--	--	--	180	0	180
15...	380	330	50	--	--	--	170	0	170
15...	370	310	60	--	--	--	170	0	180
27...	550	530	20	--	--	--	220	20	200
MAR									
10...	360	350	10	2	2	0	210	50	160
20...	1100	950	150	--	--	--	270	50	220
21...	1100	970	130	--	--	--	310	40	270
21...	1300	1100	160	--	--	--	290	30	260
22...	1800	1700	80	--	--	--	260	120	140
22...	1900	1800	110	--	--	--	240	100	140
23...	3800	3800	50	--	--	--	330	140	190
23...	3700	3700	40	--	--	--	350	150	200
23...	4300	4300	40	0	--	--	350	160	190
23...	3800	3800	30	7	--	--	380	150	230
24...	3400	3300	80	6	--	--	290	150	140
APR									
02...	70	20	50	2	--	--	160	60	100
02...	70	10	60	3	--	--	190	80	110
02...	20	0	30	6	--	--	180	70	110
02...	80	20	60	6	--	--	180	70	110
03...	1600	1600	50	3	--	--	180	60	120
03...	1400	1400	20	3	--	--	180	170	10
10...	990	--	--	0	--	--	210	--	--
11...	1200	1100	100	3	--	--	200	50	150
11...	1500	1400	100	3	--	--	180	60	120
12...	1600	1500	100	2	--	--	180	60	120
14...	2900	2900	50	28	--	--	210	80	130
16...	1900	1800	70	3	--	--	190	80	110
28...	730	620	110	1	--	--	290	40	250
MAY									
02...	1100	1000	90	2	--	--	210	50	160
02...	950	860	90	3	--	--	190	40	150
06...	940	860	80	4	--	--	4700	4600	150
09...	740	680	60	0	--	--	170	70	100
30...	270	260	10	4	--	--	80	70	10
JUN									
16...	300	300	0	5	3	2	210	100	110
JUL									
01...	400	390	10	--	--	--	120	20	100
09...	420	410	10	--	--	--	110	80	30
15...	780	770	10	2	--	--	660	80	580
AUG									
12...	400	370	30	2	--	--	190	50	140
13...	310	300	10	--	--	--	130	70	60
29...	300	290	10	--	--	--	160	50	110
SEP									
16...	280	190	90	0	0	1	80	70	10
29...	540	530	10	--	--	--	140	70	70

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)
OCT							
16...	.1	--	2	--	--	--	--
31...	.1	--	3	--	--	--	--
NOV							
13...	.1	--	6	--	--	--	--
DEC							
11...	.1	.1	7	3	4	0	0
JAN							
15...	.1	--	6	--	--	--	--
FEB							
12...	--	--	8	--	--	--	--
MAR							
10...	.2	.2	14	8	6	0	0
23...	.1	--	8	--	--	--	--
23...	.1	--	9	--	--	--	--
24...	.1	--	8	--	--	--	--
APR							
02...	.1	--	7	--	--	--	--
02...	.1	--	6	--	--	--	--
02...	.1	--	6	--	--	--	--
02...	.1	--	10	--	--	--	--
03...	.1	--	10	--	--	--	--
03...	.1	--	8	--	--	0	--
10...	--	--	7	--	--	--	--
11...	.1	--	4	--	--	--	--
11...	.1	--	5	--	--	--	--
12...	.1	--	5	--	--	--	--
14...	.1	--	7	--	--	--	--
16...	.1	--	6	--	--	--	--
28...	.1	--	5	--	--	--	--
MAY							
02...	.1	--	2	--	--	--	--
02...	.1	--	5	--	--	--	--
06...	.1	--	4	--	--	--	--
09...	.1	--	2	--	--	--	--
30...	.2	--	3	--	--	--	--
JUN							
16...	.2	.2	2	1	1	0	0
JUL							
15...	.1	--	4	--	--	--	--
AUG							
12...	.1	--	6	--	--	--	--
SEP							
16...	.1	.1	2	2	0	0	0

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
OCT							
16...	--	--	--	--	20	--	--
31...	--	--	--	--	20	--	--
NOV							
13...	--	0	--	--	90	--	--
DEC							
11...	0	0	0	0	10	0	30
JAN							
15...	--	--	--	--	20	--	--
FEB							
12...	--	0	--	--	20	--	--
MAR							
10...	0	0	0	0	30	0	--
23...	--	0	--	--	120	--	--
23...	--	0	--	--	60	--	--
24...	--	0	--	--	30	--	--
APR							
02...	--	0	--	--	20	--	--
02...	--	0	--	--	20	--	--
02...	--	7	--	--	20	--	--
02...	--	0	--	--	20	--	--
03...	--	0	--	--	40	--	--
03...	--	0	--	--	50	--	--
10...	--	--	--	--	20	--	--
11...	--	0	--	--	20	--	--
11...	--	0	--	--	20	--	--
12...	--	0	--	--	20	--	--
14...	--	--	--	--	30	--	--
16...	--	0	--	--	30	--	--
28...	--	0	--	--	10	--	--
MAY							
02...	--	0	--	--	20	--	--
02...	--	0	--	--	20	--	--
06...	--	0	--	--	10	--	--
09...	--	--	--	--	10	--	--
30...	--	0	--	--	10	--	--
JUN							
16...	0	0	0	0	30	30	0
JUL							
15...	--	--	--	--	10	--	--
AUG							
12...	--	0	--	--	10	--	--
SEP							
16...	0	0	0	0	10	0	10

DATE	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS ALPHA, DISSOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	URANIUM DISSOLVED, EXTRACTION (UG/L)
OCT										
16...	<1.4	.7	1.8	<1.0	.5	.7	1.9	.6	.05	.05
MAR										
23...	1.6	7.7	2.7	1.1	5.2	5.4	2.6	5.4	.50	.02
APR										
02...	<1.0	1.0	2.0	<.7	.7	.9	1.9	.9	.04	.06
11...	<.9	1.3	1.5	<.6	.9	1.3	1.5	1.3	.02	.04
JUL										
01...	<2.1	.4	2.1	<1.4	.3	<.4	2.2	<.4	.04	.21

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CARBON, TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, INOR-GANIC, TOTAL (MG/L AS C)	CARBON, INOR-GANIC, DIS-SOLVED (MG/L AS C)
OCT					
03...	19	2.5	--	16	11
16...	13	3.3	2.4	10	9.2
31...	17	2.2	3.2	15	11
NOV					
03...	16	2.2	2.8	14	10
13...	12	3.1	2.6	9.0	8.9
29...	15	3.8	3.1	11	9.8
30...	11	3.9	2.6	6.8	4.0
30...	12	3.8	4.2	8.0	5.5
DEC					
01...	12	3.9	--	8.5	--
01...	11	3.3	--	8.1	--
11...	--	--	6.7	11	7.6
JAN					
03...	15	2.4	1.8	13	4.0
15...	11	1.5	--	9.0	--
29...	25	3.4	1.8	22	24
FEB					
12...	13	1.5	1.0	11	13
15...	16	1.3	--	15	13
15...	15	1.4	1.7	14	9.3
15...	18	1.5	--	16	14
15...	16	1.3	1.3	15	13

DATE	CARBON, TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, INOR-GANIC, TOTAL (MG/L AS C)	CARBON, INOR-GANIC, DIS-SOLVED (MG/L AS C)
FEB					
27...	17	1.9	--	15	14
MAR					
10...	--	--	5.1	18	14
20...	12	4.0	4.4	8.4	12
21...	12	3.7	3.4	8.5	9.8
21...	23	6.2	2.9	17	9.7
23...	17	4.4	3.2	13	4.2
23...	19	4.7	--	14	2.3
23...	17	7.6	6.9	9.0	4.1
23...	16	4.9	3.6	11	1.7
24...	16	5.8	3.0	9.8	9.1
APR					
02...	10	2.5	--	7.6	--
02...	10	2.4	--	7.9	--
02...	11	2.3	--	8.4	--
02...	10	2.8	3.0	8.0	6.3
03...	12	4.3	2.4	7.8	6.7
03...	9.8	2.8	2.5	7.0	4.7
11...	11	3.9	--	7.1	--
11...	12	4.1	--	7.7	--
12...	12	3.4	--	8.4	--
14...	14	3.6	4.8	10	9.5

DATE	CARBON, TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, INOR-GANIC, TOTAL (MG/L AS C)	CARBON, INOR-GANIC, DIS-SOLVED (MG/L AS C)
APR					
16...	12	3.9	--	7.7	--
28...	--	1.3	1.3	--	--
MAY					
02...	13	2.3	2.1	11	11
02...	17	3.0	1.8	14	11
06...	14	3.1	--	11	--
09...	12	2.8	--	9.4	--
30...	12	3.9	4.6	7.7	10
JUN					
16...	--	--	2.7	16	13

DATE	CARBON, TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, INOR-GANIC, TOTAL (MG/L AS C)	CARBON, INOR-GANIC, DIS-SOLVED (MG/L AS C)
JUL					
01...	14	2.9	--	11	6.8
09...	24	2.5	2.0	21	15
15...	22	2.3	2.4	20	19
AUG					
12...	21	3.0	6.7	18	15
13...	--	--	3.6	--	12
29...	24	6.6	8.8	17	12
SEP					
16...	--	--	4.0	14	14
29...	20	4.3	16	16	14

DATE	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)
OCT								
16...	.0	.00	.10	.0	.00	.00	.00	.00
NOV								
13...	.0	.00	.00	.0	.00	.00	.00	.00
DEC								
11...	.0	.00	.00	.0	.00	.00	.00	.00
JAN								
15...	.0	.00	.10	.0	.00	.00	.00	.00
29...	.0	.00	.00	.0	.00	.00	.00	.00
FEB								
12...	.0	.00	.00	.0	.00	.00	.00	.00
MAR								
10...	.0	.00	.10	.0	.00	.00	.00	.00
22...	.0	.00	.10	.0	.00	.00	.00	.00
24...	.0	.00	.10	.0	.00	.00	.00	.00
APR								
02...	.0	.00	.00	.0	.00	.00	.00	.00
11...	.0	.00	.00	.0	.00	.00	.00	.00
MAY								
30...	.0	.00	.30	.0	.00	.00	.00	.00
JUN								
16...	.1	.00	1.2	.0	.00	.00	.00	.00
JUL								
01...	.0	.00	.60	.0	.00	.00	.00	.00
09...	.0	.00	.70	.0	.00	.00	.00	.00
15...	.1	.00	.40	.0	.00	.00	.00	.00
AUG								
12...	.1	.00	.40	.0	.00	.00	.00	.00
29...	.0	.00	.10	.0	.00	.00	.00	.00
SEP								
16...	.0	.00	.10	.0	.00	.00	.00	.00

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	PER-THANE TOTAL (UG/L)
OCT									
16...	.00	.00	.00	.00	.00	.00	.00	.00	.00
NOV									
13...	.00	.00	.00	.00	.00	.00	.00	.00	.00
DEC									
11...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JAN									
15...	.00	.00	.00	.00	.00	.00	.00	.00	.00
29...	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB									
12...	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAR									
10...	.00	.00	.00	.00	.00	.00	.00	.00	.00
22...	.00	.00	.00	.00	.00	.00	.00	.00	.00
24...	.00	.00	.00	.00	.00	.00	.00	.00	.00
APR									
02...	.00	.00	.00	.00	.00	.00	.00	.00	.00
11...	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAY									
30...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUN									
16...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUL									
01...	.00	.00	.00	.00	.00	.00	.00	.00	.00
09...	.00	.00	.00	.00	.00	.00	.00	.00	.00
15...	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG									
12...	.00	.00	.00	.00	.00	.00	.00	.00	.00
29...	.00	.00	.00	.00	.00	.00	.00	.00	.00
SEP									
16...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT								
16...	.0	.0	.0	.0	0	.00	.00	.00
NOV								
13...	.0	.0	.0	.0	0	.00	.00	.00
DEC								
11...	.0	.0	.0	.0	0	.01	.00	.00
JAN								
15...	.3	.7	.0	.0	0	.00	.00	.00
29...	.0	.0	.0	.0	0	.03	.00	.00
FEB								
12...	.0	.0	.0	.0	0	.03	.00	.00
MAR								
10...	.0	.0	.0	.0	0	.16	.00	.00
22...	.0	.0	.0	.0	0	.02	.00	.00
24...	.0	.0	.0	.0	0	.02	.00	.00
APR								
02...	.0	.0	.0	.0	0	.01	.00	.00
11...	.0	.0	.0	.0	0	.04	.00	.00
MAY								
30...	.0	.1	.0	.0	0	.11	.00	.00
JUN								
16...	.0	.2	.0	.0	0	--	--	--
JUL								
01...	.0	.2	.0	.0	0	.21	.00	.00
09...	.1	.2	.0	.0	0	.21	.00	.00
15...	.0	.1	.0	.0	0	--	--	--
AUG								
12...	.0	.1	.0	.0	0	.23	.00	.00
29...	.0	.1	.0	.0	0	.30	.00	.00
SEP								
16...	.0	.1	.0	.0	0	.27	.00	.00

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	PHYTO-PLANKTON, TOTAL (CELLS PER ML)	SESTON, TOTAL (MG/L)	SESTON ASH WEIGHT (MG/L)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)
OCT					
03...	--	--	--	7.54	.000
16...	--	--	--	1.46	.000
31...	--	--	--	4.78	.000
NOV					
03...	--	--	--	7.94	.000
13...	--	--	--	2.51	.000
30...	--	--	--	8.44	.000
30...	--	--	--	7.67	.000
DEC					
01...	--	--	--	6.54	.000
01...	--	--	--	7.22	.000
11...	--	--	--	.210	.000
JAN					
15...	--	--	--	.000	.000
FEB					
12...	--	--	--	1.50	.000
15...	--	--	--	.330	.000
15...	--	--	--	1.32	.000
15...	--	--	--	1.53	.000
15...	--	--	--	1.57	.000
27...	--	5.2	2.7	2.53	.000
MAR					
18...	--	--	--	4.28	.000
21...	--	--	--	14.5	.000

DATE	PHYTO-PLANKTON, TOTAL (CELLS PER ML)	SESTON, TOTAL (MG/L)	SESTON ASH WEIGHT (MG/L)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)
MAR					
21...	--	--	--	15.2	.000
22...	--	--	--	8.56	.000
22...	--	--	--	15.8	.000
23...	--	--	--	15.0	.000
23...	--	--	--	17.6	.000
23...	--	--	--	18.4	.000
23...	--	--	--	15.4	.000
24...	--	--	--	8.15	.000
APR					
02...	--	--	--	3.43	.000
02...	--	--	--	3.62	.000
02...	--	--	--	3.67	.000
02...	--	--	--	3.83	.000
03...	--	--	--	3.54	.000
03...	--	--	--	3.22	.000
14...	--	--	--	2.87	.000
16...	--	--	--	2.71	.000
21...	--	27	15	--	--
28...	--	--	--	10.5	.000
MAY					
02...	--	--	--	1.04	.000
02...	--	25	18	--	--

DATE	PHYTO-PLANKTON, TOTAL (CELLS PER ML)	SESTON, TOTAL (MG/L)	SESTON ASH WEIGHT (MG/L)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)
MAY					
02...	--	--	--	11.9	.000
09...	--	--	--	9.18	.450
30...	--	--	--	13.1	1.21
JUN					
16...	--	--	--	.890	.640
JUL					
01...	--	--	--	2.01	.000
09...	--	--	--	4.29	.000

DATE	PHYTO-PLANKTON, TOTAL (CELLS PER ML)	SESTON, TOTAL (MG/L)	SESTON ASH WEIGHT (MG/L)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)
JUL					
15...	8600	--	--	5.15	.000
AUG					
12...	28000	--	--	1.58	.000
29...	--	--	--	4.02	.000
SEP					
16...	8600	--	--	4.17	.000
29...	--	--	--	2.46	.430

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT				FEB			
03...	22	4370	--	27...	6	964	81
12...	23	4940	--	MAR			
16...	18	3540	90	10...	6	778	48
NOV				APR			
13...	13	2510	92	14...	73	27800	99
30...	34	1320	--	28...	--	--	93
30...	57	1910	--	JUL			
DEC				09...	10	591	87
01...	29	7830	--	15...	26	59	69
01...	50	14200	--	AUG			
11...	10	1790	92	12...	7	754	94
JAN				29...	5	339	91
03...	15	3000	--	SEP			
15...	6	974	83	16...	29	932	99
29...	6	980	--	29...	21	246	99

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT									
16...	1150	72100	50	9730	90	98	100	--	--
MAR									
23...	1830	207000	132	73800	81	95	96	98	100
23...	2030	217000	138	80900	75	91	94	96	100
APR									
02...	1130	225000	40	24300	65	83	93	98	100

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	260	160	170	230	345	130	210	215	265	290	360
2	245	260	130	180	235	345	140	200	210	270	290	340
3	245	260	155	180	230	345	115	145	210	270	290	375
4	250	260	165	180	220	350	140	175	210	275	295	350
5	250	270	170	180	260	350	145	170	215	280	295	350
6	220	230	175	180	270	340	155	140	235	280	300	350
7	210	200	180	185	250	325	155	140	220	280	295	350
8	170	205	140	160	230	305	160	150	200	280	305	350
9	170	200	170	160	290	305	160	140	200	280	300	345
10	175	195	130	160	290	310	165	180	200	280	305	350
11	195	190	195	185	300	300	165	185	235	240	305	350
12	200	205	205	190	290	349	150	195	235	240	305	350
13	200	205	170	180	300	345	140	200	275	260	305	350
14	205	205	175	200	270	350	150	205	275	240	299	350
15	210	165	220	230	280	300	145	205	280	280	250	350
16	210	205	230	260	300	305	160	200	260	260	255	350
17	220	215	200	240	300	295	150	200	210	310	265	350
18	230	215	240	270	300	240	150	200	280	300	260	350
19	225	220	240	255	300	230	150	200	260	310	280	360
20	240	220	220	285	295	230	160	205	280	305	340	360
21	235	225	240	285	325	200	160	205	275	305	280	355
22	240	220	240	285	310	145	165	210	270	300	290	355
23	235	225	240	280	340	145	140	205	260	300	300	355
24	230	240	240	245	320	130	170	205	280	300	320	350
25	240	240	240	260	320	140	165	200	270	290	340	350
26	220	240	260	260	325	135	175	195	265	290	350	350
27	250	230	270	260	340	145	160	210	280	290	350	345
28	245	295	265	260	310	135	200	210	275	290	350	345
29	260	180	215	260	345	125	200	210	270	290	325	340
30	260	150	200	260	---	125	180	210	270	295	360	340
31	260	---	185	220	---	135	---	210	---	295	355	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	12.5	8.0	4.0	2.5	3.5	8.0	14.0	22.0	25.0	29.0	28.0
2	20.0	12.5	8.0	4.0	2.5	3.0	8.0	14.0	23.0	25.0	29.0	28.0
3	20.0	12.0	6.0	5.0	2.0	3.0	8.0	14.5	23.0	26.0	29.0	29.0
4	20.0	12.0	6.0	4.5	2.0	3.0	8.0	15.0	22.0	26.0	29.0	28.0
5	19.5	11.5	5.5	4.0	1.0	3.0	8.0	16.0	22.0	26.0	29.0	28.0
6	18.0	11.0	5.0	4.0	1.0	3.0	8.5	17.0	22.0	26.0	29.0	28.0
7	17.0	10.5	6.0	4.0	3.0	4.0	10.0	17.0	22.5	26.0	29.0	28.0
8	15.0	10.0	6.0	3.0	2.0	4.0	10.0	17.0	23.0	26.0	29.5	28.0
9	14.5	10.0	6.0	3.0	1.0	4.5	11.0	18.0	23.0	26.0	29.0	28.0
10	13.0	10.0	5.0	3.0	2.0	5.5	12.0	17.0	22.5	26.5	29.0	26.0
11	13.0	10.0	5.0	3.0	2.0	6.0	12.0	17.5	22.0	27.0	29.0	27.0
12	13.0	10.0	6.0	3.0	2.5	4.0	12.0	17.0	22.0	27.0	29.0	27.0
13	11.5	10.0	6.0	3.0	3.0	5.0	12.0	17.5	22.0	27.0	29.0	27.0
14	11.5	10.0	6.0	3.0	3.0	4.0	12.0	17.0	22.0	27.0	29.0	27.0
15	12.0	10.0	6.0	2.0	3.0	5.0	12.0	17.5	22.0	27.5	29.0	26.0
16	13.0	10.0	5.0	2.0	3.0	5.0	10.0	18.0	22.5	27.0	26.0	26.0
17	12.0	10.0	5.0	2.0	3.0	5.0	10.0	18.0	21.0	28.0	28.0	26.0
18	12.0	10.5	5.0	2.0	3.0	5.0	10.0	18.0	22.0	28.0	28.0	26.0
19	13.0	10.0	5.0	2.0	3.0	6.0	10.0	18.0	22.0	28.0	27.0	25.0
20	14.0	10.0	4.5	3.0	3.5	7.0	10.5	18.0	22.0	28.5	27.0	25.0
21	14.0	9.5	4.5	3.0	4.0	7.0	12.0	18.0	22.0	29.0	26.0	25.0
22	15.0	10.0	4.5	4.0	5.0	7.0	12.5	18.5	22.5	28.0	26.0	24.5
23	15.0	10.0	4.5	4.0	5.0	6.0	13.0	19.0	23.0	29.0	26.5	24.5
24	15.0	10.0	5.0	4.5	5.0	6.0	15.0	19.5	23.0	29.0	26.5	24.5
25	15.0	12.0	4.5	4.0	5.0	5.0	15.0	21.0	23.0	29.0	27.0	24.0
26	14.5	12.0	4.5	4.0	5.0	5.0	15.0	20.0	24.0	29.0	27.0	24.0
27	14.0	12.0	4.0	3.0	4.5	5.0	14.0	20.0	24.0	29.0	27.0	24.0
28	14.0	12.0	5.0	3.5	4.0	6.0	15.0	21.0	25.0	29.0	27.0	23.5
29	14.0	11.0	4.0	3.0	3.5	7.0	15.0	21.0	25.0	29.0	28.0	23.5
30	14.0	10.0	4.5	3.0	---	7.0	14.0	21.5	25.0	29.0	27.0	23.5
31	13.0	---	5.0	3.0	---	7.0	---	23.0	---	29.0	27.0	---

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

PHYTOPLANKTON ANALYSES, AUGUST 1979 TO SEPTEMBER 1979

DATE	AUG 17,79		SEP 4,79	
TIME	1230		1100	
TOTAL CELLS/ML	4000		41000	
DIVERSITY: DIVISION	1.6		1.0	
.CLASS	1.6		1.0	
..ORDER	2.1		1.2	
...FAMILY	2.8		1.5	
....GENUS	3.3		1.8	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...CHLOROCOCCACEAE				
....CHLOROCOCCUM	--	-	470	1
...COELASTRACEAE				
....COELASTRUM	52	1	--	-
...HYDRODICTYACEAE				
....PEDIASTRUM	230	6	340	1
...OOCYSTACEAE				
....ANKISTRODESMUS	100	3	550	1
....CHLORELLA	--	-	210	1
....GLOEOACTINIUM	--	-	340	1
....KIRCHNERIELLA	210	5	1400	3
....SELENASTRUM	26	1	--	-
....TREUBARIA	39	1	--	-
...SCENEDESMACEAE				
....ACTINASTRUM	100	3	340	1
....CRUCIGENIA	--	-	3200	8
....SCENEDESMUS	770#	19	2800	7
....TETRASTRUM	52	1	--	-
..TETRASPORALES				
...PALMELLACEAE				
....SPHAEROCYSTIS	--	-	340	1
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	*	0	210	1
....PLATYMONAS	--	-	300	1
CHRYSOPHYTA				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	670#	17	430	1
....MELOSIRA	77	2	--	-
....SKELETONEMA	--	-	510	1
....THALASSIOSIRA	--	-	210	1
..PENNALES				
...FRAGILARIACEAE				
....SYNEDRA	26	1	--	-
...NITZSCHIACEAE				
....NITZSCHIA	260	6	*	0
CRYPTOPHYTA (CRYPTOMONADS)				
.CRYPTOPHYCEAE				
..CRYPTOMONADALES				
...CRYPTOMONADACEAE				
....CRYPTOMONAS	39	1	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....AGMENELLUM	930#	23	29000#	71
....ANACYSTIS	120	3	--	-
..HORMOGONALES				
...OSCILLATORIACEAE				
....OSCILLATORIA	280	7	--	-
PYRRHOPHYTA (FIRE ALGAE)				
.DINOPHYCEAE				
..PERIDINIALES				
...GLENODINIACEAE				
....GLENODINIUM	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	JUL 15,80		AUG 12,80		SEP 16,80	
TIME	1000		1400		1030	
TOTAL CELLS/ML	8600		28000		8600	
DIVERSITY: DIVISION	1.5		0.7		1.4	
.CLASS	1.5		0.7		1.4	
..ORDER	1.8		1.0		1.6	
...FAMILY	2.7		1.1		1.8	
....GENUS	3.5		1.5		2.6	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	920	11	--	-	100	1
...MICRACTINIACEAE						
....GOLENKINIA	77	1	150	1	--	-
....MICRACTINIUM	110	1	--	-	100	1
...OOCYSTACEAE						
....ANKISTRODESMUS	340	4	150	1	*	0
....CHODATELLA	--	-	*	0	--	-
....DICTYOSPHAERIUM	310	4	*	0	--	-
....KIRCHNERIELLA	310	4	*	0	--	-
....OOCYSTIS	340	4	--	-	230	3
....SELENASTHUM	--	-	--	-	*	0
....TETRAEDRON	--	-	--	-	*	0
...SCENEDESMACEAE						
....CRUCIGENIA	150	2	--	-	400	5
....SCENEDESMUS	1700#	20	1200	4	400	5
..TETRASPORALES						
...PALMELLACEAE						
....SPHAEROCYSTIS	--	-	*	0	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	*	0	150	1	100	1
...VOLVOCACEAE						
....GONIUM	230	3	--	-	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....STAURASTHUM	*	0	--	-	*	0
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	1500#	17	1200	4	1600#	19
....MELOSIRA	540	6	620	2	180	2
..PENNALES						
...FRAGILARIACEAE						
....SYNEDRA	77	1	*	0	--	-
...NITZSCHIACEAE						
....NITZSCHIA	190	2	*	0	200	2
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOMONADACEAE						
....CRYPTOMONAS	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	920	11	22000#	76	3500#	41
....ANACYSTIS	770	9	1700	6	1600#	19
..HORMOGONALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	1100	4	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01580000 DEER CREEK AT ROCKS, MD

LOCATION.--Lat 39°37'49", long 76°24'13", Harford County, Hydrologic Unit 02050306, on right bank 0.3 mi (0.5 km) upstream from bridge on Cherry Hill Road, 0.8 mi (1.3 km) southeast of Rocks, 1.2 mi (1.9 km) upstream from Stirrup Run, and 23.5 mi (37.8 km) upstream from mouth.

DRAINAGE AREA.--94.4 mi² (244.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1926 to current year. Monthly discharge only for November and December 1926, published in WSP 1302.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1502: 1927-36 (maximum and minimum only 1927-29, maximum only 1930-32, 1936).

GAGE.--Water-stage recorder. Concrete control since Sept. 7, 1938. Datum of gage is 250.40 ft (76.322 m) Baltimore city datum.

REMARKS.--Water-discharge records good except those for periods of no gage-height record, Oct. 1-4, May 1 to June 5, and winter periods, which are fair. Some regulation at low flow by mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--54 years, 126 ft³/s (3.568 m³/s), 18.13 in/yr (461 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s (385 m³/s) Aug. 23, 1933, gage height, 17.7 ft (5.39 m), from floodmarks, from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of slope-area measurements at gage heights 13.3 ft (4.05 m) and 17.7 ft (5.39 m); minimum, 8 ft³/s (0.23 m³/s) Dec. 16, 1930, Jan. 26, 1939, result of regulation; minimum daily, 8.6 ft³/s (0.24 m³/s) Sept. 11, 12, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1888, that of Aug. 23, 1933.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,900 ft³/s (53 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	(m³/s)	Gage height (ft)	(m)	Date	Time	Discharge (ft³/s)	(m³/s)	Gage height (ft)	(m)
Oct. 1	Unknown	*Unknown		Unknown		June 8	1100	1970	55.8	6.05	1.844

Minimum discharge, 41 ft³/s (1.16 m³/s) Sept. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2100	159	134	123	110	95	340	376	141	110	67	62
2	320	161	134	122	110	95	242	241	142	103	66	56
3	470	182	133	121	110	95	214	217	132	107	64	52
4	270	168	156	119	110	95	226	193	126	115	63	50
5	322	156	155	123	110	120	197	180	119	121	62	54
6	270	153	137	120	110	110	180	174	118	107	60	53
7	229	151	137	120	105	100	172	179	151	91	59	50
8	214	149	131	120	105	115	167	178	790	97	57	47
9	218	149	130	120	105	125	255	164	191	99	56	47
10	773	168	130	115	108	110	234	157	186	93	55	48
11	429	171	130	190	105	120	191	155	153	89	73	46
12	343	211	130	212	102	105	180	162	138	86	107	45
13	317	169	160	151	100	180	176	242	131	83	69	45
14	265	172	150	139	100	303	183	168	127	81	62	45
15	242	159	125	139	100	189	194	152	132	78	64	45
16	228	155	125	130	110	183	171	145	212	78	65	44
17	219	149	120	130	100	199	159	141	143	78	60	45
18	210	147	115	160	100	234	156	200	129	77	59	51
19	201	144	123	240	96	160	153	167	124	75	74	48
20	196	145	122	160	98	146	150	161	122	73	70	45
21	191	144	120	145	100	692	149	229	115	71	64	47
22	186	139	123	145	125	349	144	187	110	94	61	45
23	186	138	125	150	120	229	142	160	108	107	61	43
24	216	137	128	126	115	199	141	157	107	90	63	41
25	184	137	272	126	110	201	140	171	105	82	57	45
26	176	456	163	123	105	174	139	145	103	85	55	51
27	171	177	141	118	100	160	192	138	103	73	53	46
28	178	144	134	118	95	154	229	135	102	69	52	44
29	177	139	130	116	95	270	258	132	132	75	52	44
30	166	134	128	110	---	201	213	128	186	74	52	44
31	161	---	126	110	---	383	---	159	---	69	85	---
TOTAL	9828	4963	4267	4241	3059	5891	5687	5492	4678	2730	1967	1428
MEAN	317	165	138	137	105	190	190	177	156	88.1	63.5	47.6
MAX	2100	456	272	240	125	692	340	376	790	121	107	62
MIN	161	134	115	110	95	95	139	128	102	69	52	41
CFSM	3.36	1.75	1.46	1.45	1.11	2.01	2.01	1.88	1.65	.93	.67	.50
IN.	3.87	1.96	1.68	1.67	1.21	2.32	2.24	2.16	1.84	1.08	.78	.56

CAL YR 1979 TOTAL 83354 MEAN 228 MAX 2770 MIN 79 CFSM 2.42 IN 32.85
WTR YR 1980 TOTAL 54231 MEAN 148 MAX 2100 MIN 41 CFSM 1.57 IN 21.37

01580000 DEER CREEK AT ROCKS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-73, 1976 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
DEC											
28...	1400	132	135	8.3	--	4.0	5	31	5	7.2	3.1
MAR											
05...	1340	109	107	7.3	8.0	2.0	5	27	7	6.2	2.9
JUN											
09...	0930	194	105	7.5	--	15.5	20	31	15	7.7	2.9
AUG											
18...	1230	59	102	7.8	--	19.0	5	33	14	7.5	3.5

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
DEC											
28...	4.5	33	.4	1.3	26	5.6	8.8	.0	8.1	66	54
MAR											
05...	5.9	31	.5	1.0	20	5.1	10	.0	7.6	64	51
JUN											
09...	4.0	20	.3	2.7	16	6.8	6.7	.1	6.9	84	48
AUG											
18...	5.0	24	.4	1.4	19	2.1	9.4	.1	7.5	70	48

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
DEC											
28...	.09	23.5	2.9	.010	.03	170	110	60	40	0	40
MAR											
05...	.09	18.8	3.3	.010	.03	210	170	40	30	10	20
JUN											
09...	.11	44.0	2.7	.150	.46	6400	6300	70	200	150	50
AUG											
18...	.10	11.3	2.5	.030	.09	720	660	60	60	30	30

01581700 WINTERS RUN NEAR BENSON, MD

LOCATION.--Lat 39°31'12", long 76°22'24", Harford County, Hydrologic Unit 02060003, on left bank 30 ft (9 m) downstream from bridge on U.S. Highway 1, 0.1 mi (0.2 km) upstream from Heavenly Waters, 1.2 mi (1.9 km) northeast of Benson, 1.8 mi (2.9 km) southwest of Bel Air, and 10.5 mi (16.9 km) upstream from mouth.

DRAINAGE AREA.--34.8 mi^2 (90.1 km^2).

PERIOD OF RECORD.--August 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 195 ft (59 m), from topographic map.

REMARKS.--Records good except those for January 31 to March 12, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 56.9 ft^3/s (1.611 m^3/s), 22.20 in/yr (564 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,600 ft^3/s (215 m^3/s) June 22, 1972, gage height, 11.60 ft (3.536 m); minimum, 7.2 ft^3/s (0.20 m^3/s) July 5, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s (28 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 1	1130	1270	36.0	4.75	1.448	June 7	2300	*2230	63.2	6.18	1.884
Nov. 26	1000	1060	30.0	4.43	1.350						

Minimum discharge, 14 ft^3/s (0.40 m^3/s) Sept. 24, 25, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280	63	61	53	48	44	120	152	53	43	26	21
2	95	64	61	53	48	44	81	87	48	39	24	19
3	126	102	59	52	48	44	72	72	50	55	24	16
4	76	67	59	51	48	44	96	64	46	46	24	15
5	142	63	58	53	48	55	72	61	43	41	25	18
6	90	62	59	52	48	50	65	59	44	38	25	18
7	70	61	61	52	48	46	63	58	195	35	23	16
8	64	60	56	51	48	55	62	61	309	39	21	15
9	85	61	55	50	49	60	126	58	77	38	21	15
10	305	117	54	51	51	50	84	56	75	36	20	15
11	132	91	54	89	49	55	69	56	61	31	29	14
12	116	98	54	110	48	46	64	58	54	31	32	14
13	99	74	70	61	47	109	63	61	50	30	25	14
14	82	72	62	59	46	179	66	55	49	29	21	14
15	75	65	56	56	46	84	66	54	89	28	21	16
16	72	62	55	55	52	66	62	52	122	28	23	14
17	70	61	54	53	46	64	60	52	59	28	20	15
18	68	60	53	85	46	75	59	81	51	27	20	25
19	66	59	53	107	46	58	57	72	49	26	70	18
20	65	58	53	64	45	56	58	66	46	27	32	16
21	65	57	52	59	46	294	56	91	44	51	25	18
22	65	57	54	60	56	111	55	61	45	65	25	17
23	68	57	55	62	54	74	55	54	43	65	24	15
24	86	57	55	55	52	67	55	54	43	48	21	14
25	66	58	182	54	50	80	55	54	43	32	20	18
26	65	277	70	53	48	63	56	48	41	28	19	18
27	63	99	61	51	46	59	114	47	39	28	19	15
28	69	76	57	52	45	57	102	46	34	27	19	14
29	65	67	56	51	44	158	86	45	84	62	17	14
30	63	63	55	49	---	81	80	45	69	29	19	14
31	62	---	54	48	---	195	---	62	---	27	23	---
TOTAL	2915	2288	1898	1851	1396	2523	2179	1942	2060	1157	757	485
MEAN	94.0	76.3	61.2	59.7	48.1	81.4	72.6	62.6	68.7	37.3	24.4	16.2
MAX	305	277	182	110	56	294	126	152	309	65	70	25
MIN	62	57	52	48	44	44	55	45	39	26	17	14
CFSM	2.70	2.19	1.76	1.72	1.38	2.34	2.09	1.80	1.97	1.07	.70	.47
IN.	3.12	2.45	2.03	1.98	1.49	2.70	2.33	2.08	2.20	1.24	.81	.52

CAL YR 1979 TOTAL 30911 MEAN 84.7 MAX 1190 MIN 26 CFSM 2.43 IN 33.04
WTR YR 1980 TOTAL 21451 MEAN 58.6 MAX 309 MIN 14 CFSM 1.68 IN 22.93

01582000 LITTLE FALLS AT BLUE MOUNT, MD

LOCATION.--Lat 39°36'16", long 76°37'16", Baltimore County, Hydrologic Unit 02060003, on left bank at downstream side of Pennsylvania Railroad bridge, 0.2 mi (0.3 km) north of Blue Mount, 0.6 mi (1.0 km) upstream from mouth, 0.9 mi (1.4 km) downstream from First Mine Branch, and 1.2 mi (1.9 km) south of White Hall.

DRAINAGE AREA.--52.9 mi² (137.0 km²).

PERIOD OF RECORD.--June 1944 to current year.

REVISED RECORDS.--WSP 111: 1944(M), 1945-47(P).

GAGE.--Water-stage recorder. Altitude of gage is 305 ft (93 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, June 5 to July 21, which are fair. Slight diurnal fluctuation at low flow caused by mill above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years, 70.0 ft³/s (1.982 m³/s), 17.97 in/yr (456 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,280 ft³/s (234 m³/s) June 22, 1972, gage height, 18.54 ft (5.651 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 1.9 ft³/s (0.054 m³/s) Aug. 29, 1966; minimum daily, 4.5 ft³/s (0.13 m³/s) Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,280 ft³/s (121 m³/s) Oct. 1, gage height 10.17 ft (3.100 m), no other peak above base of 1,000 ft³/s (28 m³/s); minimum discharge, 21 ft³/s (0.59 m³/s) Sept. 21, gage height 0.42 ft (0.128 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1010	116	99	74	65	55	167	181	79	65	42	35
2	242	118	97	73	65	55	131	125	79	60	42	32
3	290	133	93	74	65	55	119	115	75	62	40	30
4	190	117	94	72	65	55	129	104	71	65	39	28
5	220	113	92	74	65	70	111	98	70	70	37	33
6	180	111	93	72	65	64	103	95	70	60	36	30
7	164	110	94	72	66	59	99	98	130	54	35	28
8	153	108	88	71	67	67	96	99	350	57	34	26
9	165	108	86	70	65	71	157	91	110	58	31	26
10	425	122	86	68	65	63	122	87	105	55	34	26
11	250	125	85	89	64	69	107	87	95	52	63	24
12	224	132	85	111	63	58	102	104	85	50	62	24
13	201	118	102	78	60	88	101	118	80	49	38	24
14	179	120	94	78	60	162	108	91	77	48	36	25
15	168	110	86	79	58	117	110	84	77	46	37	25
16	162	108	86	74	63	111	98	81	120	46	37	24
17	157	104	83	72	59	138	92	79	85	46	33	25
18	152	103	79	101	58	133	90	119	75	45	35	30
19	146	100	79	132	58	99	88	99	73	44	44	26
20	143	99	78	91	58	90	87	98	70	43	39	24
21	140	96	77	84	59	330	85	149	66	42	42	26
22	137	96	79	83	73	183	83	110	65	66	36	26
23	143	95	80	84	68	134	83	96	64	76	43	24
24	157	94	81	76	66	117	83	103	63	54	40	23
25	135	93	129	75	63	116	82	98	62	47	33	26
26	130	210	91	73	60	100	83	85	61	45	32	28
27	126	132	83	70	57	93	129	81	60	43	31	25
28	133	114	80	71	58	90	125	78	60	42	30	25
29	127	107	78	69	56	154	130	76	75	47	30	24
30	121	102	77	65	---	112	113	74	100	44	29	24
31	118	---	76	65	---	186	---	91	---	42	72	---
TOTAL	6288	3414	2710	2440	1814	3294	3213	3094	2652	1623	1212	796
MEAN	203	114	87.4	78.7	62.6	106	107	99.8	88.4	52.4	39.1	26.5
MAX	1010	210	129	132	73	330	167	181	350	76	72	35
MIN	118	93	76	65	56	55	82	74	60	42	29	23
CFSM	3.84	2.16	1.65	1.49	1.18	2.00	2.02	1.89	1.67	.99	.74	.50
IN.	4.42	2.40	1.91	1.72	1.28	2.32	2.26	2.18	1.86	1.14	.85	.56

CAL YR 1979 TOTAL 45983 MEAN 126 MAX 1880 MIN 47 CFSM 2.38 IN 32.34
WTR YR 1980 TOTAL 32550 MEAN 88.9 MAX 1010 MIN 23 CFSM 1.68 IN 22.89

01583000 SLADE RUN NEAR GLYNDON, MD

LOCATION.--Lat 39°29'40", long 76°47'45", Baltimore County, Hydrologic Unit 02060003, on left bank at downstream side of bridge on Longnecker Road, 1.1 mi (1.8 km) upstream from mouth, 1.6 mi (2.6 km) northeast of Glyndon, and 2.6 mi (4.2 km) northeast of Reisterstown.

DRAINAGE AREA.--2.09 mi^2 (5.41 km^2).

PERIOD OF RECORD.--September 1947 to current year.

REVISED RECORD.--WSP 1502: Drainage area. WDR MD-DE-79-1: 1973-78(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 425.25 ft (129.616 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for the period May 1 to June 2, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 2.42 ft^3/s (0.069 m^3/s), 15.72 in/yr (399 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 515 ft^3/s (14.6 m^3/s) June 22, 1972, gage height, 4.80 ft (1.463 m), from rating curve extended above 80 ft^3/s (2.27 m^3/s) on basis of slope-area measurement at gage height 3.96 ft (1.207 m); no flow many days in August and September 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 249 ft^3/s (7.05 m^3/s) Oct. 1, gage height, 4.20 ft (1.280 m), no other peak above base of 90 ft^3/s (2.5 m^3/s); minimum, 0.63 ft^3/s (0.018 m^3/s) Sept. 12, 13, 14, 23, 24, 25, gage height 2.04 ft (0.622 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	4.6	3.9	3.0	2.7	2.8	5.9	9.0	3.0	2.6	1.7	1.0
2	7.3	4.8	3.5	3.0	2.7	2.8	4.6	6.0	3.2	2.4	1.6	.95
3	12	5.2	3.5	3.0	2.7	2.7	4.0	5.5	3.2	2.4	1.5	.85
4	6.5	4.8	3.5	2.9	2.7	2.5	4.6	5.0	3.0	2.6	1.4	.80
5	10	4.6	3.5	3.0	2.6	3.3	3.9	4.8	2.8	2.4	1.4	1.2
6	6.7	4.6	3.5	2.9	2.6	2.9	3.5	4.8	2.8	2.3	1.4	.95
7	6.0	4.4	3.5	2.9	2.6	2.7	3.5	4.8	2.8	2.2	1.4	.88
8	5.1	4.4	3.3	2.9	2.6	2.9	3.3	4.4	9.0	2.4	1.3	.80
9	7.2	4.4	3.3	2.8	2.6	2.9	6.1	4.0	3.8	2.4	1.3	.80
10	20	5.0	3.3	2.8	2.6	2.9	5.2	3.8	3.7	2.2	1.2	.82
11	9.0	5.5	3.2	4.1	2.6	3.1	4.1	3.8	3.3	2.0	1.3	.77
12	7.5	5.5	3.2	4.8	2.6	2.7	3.9	5.0	3.0	1.9	1.8	.74
13	6.6	5.2	4.4	3.2	2.5	6.5	3.7	4.0	2.8	1.9	1.9	.73
14	5.8	5.0	3.9	3.2	2.5	8.0	4.4	3.4	2.7	1.8	1.8	.81
15	5.6	4.8	3.5	3.2	2.5	5.5	4.4	3.2	2.7	1.8	1.6	.80
16	5.5	4.6	3.5	3.1	2.7	4.4	3.9	3.0	5.9	1.7	1.8	.78
17	5.4	4.4	3.3	3.0	2.5	4.8	3.7	3.0	3.5	1.6	1.4	.78
18	5.2	4.4	3.2	4.6	2.4	4.8	3.7	5.5	3.0	1.7	1.3	1.1
19	5.2	4.1	3.2	4.8	2.4	3.6	3.5	5.0	2.8	1.6	2.6	.85
20	5.2	4.1	3.2	3.6	2.3	3.3	3.5	5.0	2.7	1.6	1.7	.85
21	5.1	4.1	3.2	3.2	2.5	12	3.5	10	2.6	1.6	1.4	.87
22	5.2	4.1	3.2	3.3	3.0	5.7	3.4	6.0	2.6	1.9	1.4	.80
23	5.6	4.4	3.2	3.2	3.1	4.4	3.4	4.4	2.6	2.6	1.3	.75
24	5.3	4.4	3.3	2.9	3.2	4.1	3.3	6.0	2.6	2.2	1.0	.68
25	4.9	4.1	4.6	2.8	3.0	4.1	3.3	4.0	2.6	1.9	1.0	1.1
26	4.8	9.4	3.4	2.8	2.9	3.5	3.4	3.2	2.6	1.9	.97	.95
27	4.8	5.5	3.2	2.8	2.8	3.3	5.7	3.2	2.4	1.8	1.2	.82
28	5.0	4.6	3.2	2.8	2.8	3.4	6.2	3.2	2.3	1.7	.98	.91
29	4.7	4.1	3.2	2.8	2.8	7.3	6.2	3.2	2.6	1.9	.89	.80
30	4.6	3.9	3.2	2.7	---	4.6	4.8	3.2	3.3	1.9	.95	.80
31	4.6	---	3.0	2.7	---	7.6	---	3.8	---	1.8	1.0	---
TOTAL	224.4	143.0	106.1	98.8	77.5	135.1	126.6	143.2	95.9	62.7	43.49	25.74
MEAN	7.24	4.77	3.42	3.19	2.67	4.36	4.22	4.62	3.20	2.02	1.40	.86
MAX	28	9.4	4.6	4.8	3.2	12	6.2	10	9.0	2.6	2.6	1.2
MIN	4.6	3.9	3.0	2.7	2.3	2.5	3.3	3.0	2.3	1.6	.89	.68
CFSM	3.46	2.28	1.64	1.53	1.28	2.09	2.02	2.21	1.53	.97	.67	.41
IN.	3.99	2.54	1.89	1.76	1.38	2.40	2.25	2.55	1.71	1.12	.77	.46

CAL YR 1979 TOTAL 1688.50 MEAN 4.63 MAX 54 MIN 1.8 CFSM 2.22 IN 30.04
WTR YR 1980 TOTAL 1282.53 MEAN 3.50 MAX 28 MIN .68 CFSM 1.68 IN 22.82

01583500 WESTERN RUN AT WESTERN RUN, MD

LOCATION.--Lat 39°30'38", long 76°40'37", Baltimore County, Hydrologic Unit 02060003, on right bank 100 ft (30 m) downstream from bridge on Western Run Road, 0.3 mi (0.5 km) southeast of Western Run, 2.5 mi (4.0 km) northwest of Cockeysville, 3.2 mi (5.1 km) upstream from Beaverdam Run, and 5.0 mi (8.0 km) upstream from mouth.

DRAINAGE AREA.--59.8 mi² (154.9 km²).

PERIOD OF RECORD.--September 1944 to current year.

REVISED RECORDS.--WSP 1502: 1945-46, 1948(M).

GAGE.--Water-stage recorder. Datum of gage is 262.78 ft (80.095 m) Baltimore County datum.

REMARKS.--Records good except those for period of missing record, June 21 to Aug. 22, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years, 70.3 ft³/s (1.991 m³/s), 15.96 in/yr (405 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft³/s (1,080 m³/s) June 22, 1972, gage height, 26.0 ft (7.92 m), from floodmarks, from rating curve extended above 3,200 ft³/s (90.6 m³/s) on basis of slope-area measurement and contracted-opening measurement at gage height 26.0 ft (7.92 m); minimum, 2.4 ft³/s (0.068 m³/s) Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1315	*4160	118	8.82	2.688	Oct. 10	0630	1210	34.3	4.33	1.320
Oct. 5	1715	1060	30.0	4.04	1.231	June 8	0030	1280	36.2	4.45	1.356

Minimum discharge, 22 ft³/s (0.62 m³/s) Sept. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	116	97	80	70	58	171	182	89	66	43	31
2	222	120	96	79	70	58	130	132	85	62	43	29
3	324	137	94	79	70	58	117	141	87	64	41	28
4	177	120	94	79	70	58	126	110	83	70	40	27
5	274	113	94	80	70	74	109	101	76	75	38	33
6	178	112	94	78	70	69	101	97	75	64	37	30
7	151	111	94	79	67	62	98	95	146	56	36	28
8	139	110	92	78	64	68	97	97	417	58	35	26
9	180	109	90	78	64	78	146	92	116	60	33	26
10	640	123	90	75	65	66	123	88	115	56	36	26
11	261	129	90	90	64	76	105	89	97	54	65	25
12	216	145	90	123	63	63	101	95	89	52	64	25
13	190	126	107	86	61	102	99	112	85	50	39	24
14	167	133	99	86	61	228	103	89	82	50	37	25
15	156	116	91	87	62	144	110	84	83	47	38	26
16	147	112	91	81	67	121	97	81	125	47	38	25
17	143	109	89	80	62	125	93	81	89	47	34	26
18	137	107	84	100	60	138	92	123	82	46	36	31
19	134	104	86	148	59	103	90	107	80	45	44	27
20	132	101	85	100	60	96	89	108	75	44	40	26
21	130	100	85	94	62	326	89	171	70	43	42	27
22	130	99	87	92	76	167	85	116	68	70	38	26
23	134	99	87	95	72	125	85	98	66	85	38	25
24	150	99	89	86	70	113	83	114	65	56	36	23
25	131	97	115	84	67	112	83	106	64	50	33	29
26	129	205	93	83	64	100	84	90	63	46	32	30
27	126	133	88	81	61	96	120	85	62	44	31	25
28	131	112	85	77	61	94	127	83	62	43	30	25
29	127	104	84	75	59	169	139	81	80	47	30	25
30	120	100	82	70	---	121	108	79	110	45	30	25
31	117	---	81	70	---	189	---	119	---	43	41	---
TOTAL	6463	3501	2823	2673	1891	3457	3200	3246	2886	1685	1198	804
MEAN	208	117	91.1	86.2	65.2	112	107	105	96.2	54.4	38.6	26.8
MAX	1070	205	115	148	76	326	171	182	417	85	65	33
MIN	117	97	81	70	59	58	83	79	62	43	30	23
CFSM	3.48	1.96	1.52	1.44	1.09	1.87	1.79	1.76	1.61	.91	.65	.45
IN.	4.02	2.18	1.76	1.66	1.18	2.15	1.99	2.02	1.80	1.05	.75	.50

CAL YR 1979 TOTAL 50206 MEAN 138 MAX 2110 MIN 47 CFSM 2.31 IN 31.23
WTR YR 1980 TOTAL 33827 MEAN 92.4 MAX 1070 MIN 23 CFSM 1.55 IN 21.04

01584050 LONG GREEN CREEK AT GLEN ARM, MD

LOCATION.--Lat 39°27'17", long 76°28'45", Baltimore County, Hydrologic Unit 02060003, on right bank 0.5 mi (0.8 km) downstream from bridge on Glen Arm Road, 0.6 mi (1.0 km) upstream from State Highway 147 (Harford Road), 0.8 mi (1.3 km) east of Glen Arm, and 1.6 mi (2.6 km) upstream from mouth.

DRAINAGE AREA.--9.40 mi² (24.3 km²).

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 230 ft (70 m), from topographic map.

REMARKS.--Records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--5 years, 13.9 ft³/s (0.394 m³/s), 20.08 in/yr (510 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,610 ft³/s (73.9 m³/s) Aug. 27, 1978, gage height, 6.31 ft (1.923 m); minimum, 1.0 ft³/s (0.028 m³/s) Jan. 29, 1977, gage height, 0.79 ft (0.241 m), result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1045	*679	19.2	4.31	1.314	June 7	2300	570	16.1	4.15	1.265
Nov. 26	1015	463	13.1	3.96	1.207						

Minimum discharge, 3.4 ft³/s (0.10 m³/s) Sept. 23, 24, 25, gage height, 1.00 ft (0.305 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	13	15	12	10	9.0	35	44	12	9.8	7.0	4.6
2	23	13	14	12	10	9.0	18	25	11	9.3	6.8	4.5
3	33	18	13	12	10	9.0	16	20	14	11	6.5	4.4
4	19	13	13	11	9.9	9.0	22	16	12	9.8	6.5	4.2
5	41	13	13	11	9.9	11	17	15	11	9.2	6.2	4.7
6	20	13	13	11	9.5	9.9	15	14	10	8.8	5.9	4.5
7	17	13	13	11	9.6	9.4	14	13	61	8.4	5.9	4.2
8	15	12	12	11	9.6	10	14	15	44	9.1	5.6	3.9
9	23	12	12	11	9.6	11	30	13	14	8.8	5.5	4.0
10	117	29	12	11	9.8	9.6	19	13	14	8.1	5.5	4.0
11	29	22	12	22	9.8	11	16	12	12	8.0	6.6	3.9
12	34	22	12	24	9.7	9.3	14	14	11	7.5	6.5	3.9
13	25	18	15	13	9.4	33	14	14	11	7.2	5.7	3.8
14	20	17	13	13	9.6	37	15	12	11	7.0	5.1	3.9
15	18	15	12	13	9.6	17	15	12	13	7.0	5.6	4.0
16	18	14	12	12	11	14	14	12	17	7.2	5.7	3.7
17	17	14	12	12	9.5	15	14	11	12	7.4	4.8	3.9
18	16	13	11	29	9.4	18	13	20	11	6.9	5.0	6.1
19	16	13	11	25	9.4	13	13	22	10	6.5	30	4.2
20	15	13	11	15	9.3	13	13	18	9.8	6.6	7.9	4.1
21	15	13	11	13	9.6	91	13	29	9.6	11	6.6	4.3
22	15	13	11	13	11	24	12	17	9.4	17	6.3	4.1
23	17	12	11	14	11	19	12	14	9.2	14	6.1	3.9
24	17	12	11	12	11	18	12	14	9.1	8.9	5.6	3.4
25	14	12	44	12	11	21	12	14	9.1	7.4	5.4	4.5
26	14	94	15	11	9.8	14	13	12	9.0	7.0	5.2	4.1
27	14	24	13	11	9.3	13	30	12	9.0	6.8	5.2	3.6
28	15	19	13	11	9.1	13	24	12	8.6	6.4	5.0	3.6
29	14	16	13	11	9.0	50	20	11	38	30	5.1	3.6
30	13	15	12	10	---	1-	18	11	12	8.6	5.1	3.7
31	13	---	12	10	---	60	---	13	---	7.4	4.8	---
TOTAL	778	540	417	419	285.4	618.2	507	494	443.8	288.1	204.7	123.3
MEAN	25.1	18.0	13.5	13.5	9.84	19.9	16.9	15.9	14.8	9.29	6.60	4.11
MAX	117	94	44	29	11	91	35	44	61	30	30	6.1
MIN	13	12	11	10	9.0	9.0	12	11	8.6	6.4	4.8	3.4
CFSM	2.67	1.92	1.44	1.44	1.05	2.12	1.80	1.69	1.57	.99	.70	.44
IN.	3.08	2.14	1.65	1.66	1.13	2.45	2.01	1.95	1.76	1.14	.81	.49

CAL YR 1979 TOTAL 7531.0 MEAN 20.6 MAX 281 MIN 6.6 CFSM 2.19 IN 29.80
WTR YR 1980 TOTAL 5118.5 MEAN 14.0 MAX 117 MIN 3.4 CFSM 1.49 IN 20.25

01585100 WHITEMARSH RUN AT WHITE MARSH, MD

LOCATION.--Lat 39°22'15", long 76°26'46", Baltimore County, Hydrologic Unit 02060003, on left bank at upstream side of bridge on State Highway 7, 1 mi (1.6 km) southwest of White Marsh, and 3 mi (4.8 km) upstream from mouth.

DRAINAGE AREA.--7.61 mi² (19.71 km²).

PERIOD OF RECORD.--February 1959 to current year.

REVISED RECORDS.--WDR MD-DE-73-1: 1960(M), 1967-68, 1969(M). WDR MD-DE-79-1: 1965-66(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 38.96 ft (11.875 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for February, which are fair. Low flow affected by operations of sand and gravel plant in vicinity of gage. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years, 11.6 ft³/s (0.329 m³/s), 20.70 in/yr (526 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s (227 m³/s) Aug. 1, 1971, gage height, 14.05 ft (4.282 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of computation of flow-through-culvert at gage height 10.04 ft (3.060 m) and computation of flow-through-culvert and over road at gage height 14.05 ft (4.282 m); no flow for part of Mar. 20, 1965, caused by construction work above station; minimum daily, 0.10 ft³/s (0.003 m³/s) Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft³/s (21 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1015	965	27.3	5.19	1.582	Mar. 13	2030	869	24.6	4.78	1.457
Oct. 5	1400	872	24.7	4.79	1.460	Mar. 21	0700	754	21.4	4.35	1.326
Nov. 26	0915	936	26.5	5.05	1.539	Apr. 27	2000	*1350	38.2	7.07	2.155

Minimum discharge, 0.70 ft³/s (0.020 m³/s) Sept. 7, 8, 9, 10, 11, 15, 16, 17, 24, 25; minimum daily discharge, 0.74 ft³/s (0.021 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	5.6	5.9	5.1	3.9	4.7	30	72	3.8	2.7	2.2	1.0
2	13	6.8	5.5	4.7	3.9	4.7	13	32	3.9	2.5	1.9	1.0
3	39	41	5.1	4.7	3.9	4.7	10	19	9.8	8.1	4.4	.99
4	7.9	8.0	5.1	4.9	3.9	5.0	28	8.3	4.0	3.4	3.2	.87
5	75	6.6	5.1	5.2	3.9	15	10	6.5	3.0	2.7	21	2.7
6	15	6.3	5.9	9.0	3.6	7.1	7.8	5.5	3.0	2.3	5.1	1.3
7	8.8	6.1	6.3	7.0	3.9	5.7	7.0	5.2	26	1.9	2.6	.95
8	7.3	5.9	4.7	5.4	3.9	13	6.7	6.5	21	5.8	2.1	.79
9	27	5.9	4.7	5.3	4.3	12	39	5.0	4.5	2.8	1.7	.85
10	159	41	4.7	5.0	5.5	6.7	12	4.5	6.1	2.2	1.7	.87
11	25	31	5.5	34	5.0	9.0	7.9	4.6	3.7	2.0	6.4	.76
12	35	27	5.5	31	4.7	5.5	7.1	12	3.5	1.9	2.9	.83
13	18	12	21	7.5	4.3	104	6.6	7.8	3.5	1.7	1.7	.83
14	10	11	7.5	7.0	4.3	61	9.8	4.6	3.2	1.7	1.5	.92
15	8.8	7.7	5.5	6.2	3.9	13	7.4	3.9	3.6	1.7	1.8	.90
16	8.0	7.0	5.5	5.6	8.0	8.2	6.0	3.8	9.0	5.0	1.9	.74
17	7.3	6.8	5.0	5.4	5.5	12	5.5	3.5	3.6	3.8	1.2	.82
18	7.1	6.4	4.8	58	5.0	20	5.4	32	3.2	2.0	1.9	8.9
19	6.8	6.3	4.7	35	4.3	7.7	5.4	9.7	3.2	1.8	11	1.2
20	6.6	6.3	4.3	9.5	4.3	6.8	5.3	14	2.9	1.7	2.6	1.1
21	6.3	5.9	4.3	7.4	4.3	151	5.1	55	2.6	20	1.8	1.1
22	6.3	5.9	5.1	18	12	21	4.9	9.1	2.5	29	1.6	1.1
23	13	5.9	4.7	13	8.7	10	4.9	5.9	2.6	8.7	1.5	1.0
24	11	5.9	5.1	8.0	6.8	11	6.1	5.5	2.6	3.8	1.4	.76
25	6.3	6.1	66	6.4	5.9	25	6.1	5.1	2.6	2.9	1.3	4.1
26	5.9	139	8.7	5.5	4.7	9.0	8.2	4.0	2.6	2.5	1.2	1.7
27	5.8	15	6.8	5.5	4.3	7.5	144	3.7	2.7	2.3	1.2	1.1
28	8.3	8.7	5.9	5.5	6.3	8.5	37	3.6	2.4	2.2	1.1	1.0
29	6.3	6.8	5.5	5.0	5.9	99	26	3.5	17	31	1.1	.97
30	5.7	6.3	5.5	4.7	---	17	17	3.3	4.7	3.7	1.2	1.1
31	5.5	---	5.1	4.3	---	103	---	5.1	---	2.5	1.1	---
TOTAL	659.0	460.2	245.0	338.8	148.9	787.8	489.2	364.2	166.8	166.3	93.3	42.25
MEAN	21.3	15.3	7.90	10.9	5.13	25.4	16.3	11.7	5.56	5.36	3.01	1.41
MAX	159	139	66	58	12	151	144	72	26	31	21	8.9
MIN	5.5	5.6	4.3	4.3	3.6	4.7	4.9	3.3	2.4	1.7	1.1	.74
CFSM	2.80	2.01	1.04	1.43	.67	3.34	2.14	1.54	.73	.70	.40	.19
IN.	3.22	2.25	1.20	1.66	.73	3.85	2.39	1.78	.82	.81	.46	.21

CAL YR 1979 TOTAL 7581.90 MEAN 20.8 MAX 393 MIN 1.9 CFSM 2.73 IN 37.06
WTR YR 1980 TOTAL 3961.75 MEAN 10.8 MAX 159 MIN .74 CFSM 1.42 IN 19.36

01585200 WEST BRANCH HERRING RUN AT IDLEWYLDE, MD

LOCATION.--Lat 39°22'25", long 76°35'05", Baltimore County, Hydrologic Unit 02060003, on left bank 40 ft (12 m) downstream from bridge on Regester Avenue, at Idlewylde, 0.1 mi (0.2 km) north of Baltimore city limits, 1 mi (1.6 km) upstream from mouth, and 1.3 mi (2.1 km) east of State Highway 45.

DRAINAGE AREA.--2.13 mi² (5.52 km²).

PERIOD OF RECORD.--July 1957 to May 1965, January 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 285 ft (87 m), from topographic map. Prior to May 31, 1965, at site 40 ft (12 m) upstream at datum 3.24 ft (0.988 m) higher.

REMARKS.--Records good except those for Dec. 27 to Jan. 31, which are fair. Diurnal fluctuation (occasionally extensive) caused by ready-mixed concrete plant above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years (water years 1958-64, 1967-80), 2.69 ft³/s (0.0762 m³/s), 17.15 in/yr (436 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,740 ft³/s (49.3 m³/s) Sept. 11, 1971, gage height, 6.80 ft (2.073 m), from rating curve extended above 90 ft³/s (2.55 m³/s) on basis of slope-area measurement at gage height 6.37 ft (1.942 m); no flow Aug. 14-24, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 290 ft³/s (8.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	0845	494	14.0	4.18	1.274	June 29	1645	311	8.81	3.53	1.076
Oct. 5	1245	436	12.3	3.99	1.216	July 21	1900	*646	18.3	4.62	1.408

Minimum discharge, 0.03 ft³/s (0.001 m³/s) Sept. 24; minimum daily, 0.15 ft³/s (0.004 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	1.3	1.6	1.1	1.1	.86	4.2	12	3.9	.73	.51	.38
2	4.1	2.5	1.5	1.1	1.1	1.0	2.8	4.8	1.3	.72	.48	.29
3	11	3.8	1.4	1.1	1.1	1.2	2.6	2.8	6.7	2.1	2.7	.28
4	2.5	1.3	1.4	1.1	1.1	1.1	6.6	2.1	1.3	.77	.57	.26
5	19	1.2	1.4	1.2	1.1	3.5	2.2	1.8	1.3	.69	.45	2.9
6	3.2	1.2	1.8	1.4	1.1	1.2	2.1	1.8	1.2	.60	.48	.93
7	2.5	1.2	1.5	1.4	1.1	1.0	2.2	1.8	3.9	.54	.68	.30
8	2.2	1.2	1.3	1.2	1.1	3.0	2.2	2.6	2.7	2.8	.42	.24
9	12	1.2	1.2	1.2	1.1	1.2	13	1.6	1.3	.65	.42	.25
10	35	11	1.2	1.1	1.6	1.3	2.5	1.5	2.2	.66	4.8	.30
11	4.6	7.1	1.2	9.4	1.2	1.3	2.1	1.7	.99	.60	1.3	.30
12	9.5	2.6	1.2	3.0	1.0	.93	2.1	3.2	.96	.58	.48	.35
13	3.0	3.3	5.9	1.4	.97	24	1.9	2.7	.97	.51	.42	.38
14	2.6	2.3	1.5	1.4	.99	7.9	4.8	1.4	.96	.50	.37	.33
15	2.4	1.8	1.3	1.3	.98	2.1	2.1	1.3	1.8	.52	.72	.45
16	2.3	1.7	1.2	1.2	2.7	1.6	1.7	1.2	3.4	4.6	.48	.16
17	2.1	1.6	1.2	1.1	1.1	4.2	1.7	1.2	.92	.75	.35	.33
18	2.0	1.5	1.2	15	1.1	4.7	1.7	15	.89	.52	.57	6.6
19	1.8	1.4	1.2	2.9	1.0	1.5	1.7	4.1	.89	.44	2.6	.26
20	2.4	1.4	1.2	1.6	1.0	1.4	1.6	6.0	.83	.46	.51	.32
21	2.1	1.3	1.2	1.4	1.0	29	1.8	10	.82	19	.39	.30
22	1.5	1.3	1.3	4.3	4.5	2.8	1.5	1.9	.84	12	.39	.24
23	3.9	1.3	1.2	1.7	1.4	2.1	1.5	1.7	.76	1.5	.42	.21
24	1.7	1.3	2.4	1.3	1.6	4.9	2.1	4.0	.79	.72	.38	.17
25	1.5	1.3	14	1.3	1.2	3.7	2.1	1.7	.78	.64	.34	3.4
26	1.5	23	1.5	1.3	1.0	1.8	4.8	1.3	.83	.64	.35	.29
27	1.5	2.4	1.3	1.2	1.0	1.7	18	1.2	.74	.54	.39	.21
28	2.6	1.9	1.2	1.2	1.4	5.1	5.6	1.3	.73	.54	.35	.23
29	1.4	1.7	1.2	1.2	.98	19	3.3	1.3	10	7.8	.35	.15
30	1.3	1.6	1.2	1.1	---	2.8	7.8	1.3	.95	.57	.35	.27
31	1.3	---	1.1	1.2	---	25	---	2.9	---	.54	.31	---
TOTAL	172.5	87.7	59.0	67.4	37.62	162.89	110.3	99.2	55.65	64.23	23.33	21.08
MEAN	5.56	2.92	1.90	2.17	1.30	5.25	3.68	3.20	1.86	2.07	.75	.70
MAX	35	23	14	15	4.5	29	18	15	10	19	4.8	6.6
MIN	1.3	1.2	1.1	1.1	.97	.86	1.5	1.2	.73	.44	.31	.15
CFSM	2.61	1.37	.89	1.02	.61	2.47	1.73	1.50	.87	.97	.35	.33
IN.	3.01	1.53	1.03	1.18	.66	2.84	1.93	1.73	.97	1.12	.41	.37

CAL YR 1979 TOTAL 1687.26 MEAN 4.62 MAX 55 MIN .72 CFSM 2.17 IN 29.45
WTR YR 1980 TOTAL 960.90 MEAN 2.63 MAX 35 MIN .15 CFSM 1.24 IN 16.77

01585300 STEMMERS RUN AT ROSSVILLE, MD

LOCATION.--Lat 39°20'28", long 76°29'17", Baltimore County, Hydrologic Unit 02060003, on left bank 500 ft (152 m) upstream from bridge on State Highway 7, at Rossville, 0.9 mi (1.4 km) upstream from Brien Run, and 2.1 mi (3.4 km) upstream from mouth.

DRAINAGE AREA.--4.46 mi² (11.55 km²).

PERIOD OF RECORD.--December 1958 to September 1972, October 1973 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 21.64 ft (6.596 m) Baltimore County datum. Prior to Sept. 30, 1972, at site on old channel about 550 ft (168 m) southeast of present site at datum 2.40 ft (0.732 m) lower.

REMARKS.--Records good. Slight diurnal fluctuation at times from unknown source. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years (water years 1960-72, 1974-80), 6.85 ft³/s (0.194 m³/s), 20.86 in/yr (530 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,950 ft³/s (169 m³/s) Aug. 1, 1971, gage height, 11.34 ft (3.456 m), from high-water mark in well, site and datum then in use, from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum daily, 0.10 ft³/s (0.003 m³/s) many days in 1962, 1964, and 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	0915	1070	30.3	3.95	1.204	Mar. 13	2000	728	20.6	3.46	1.055
Oct. 5	1330	767	21.7	3.52	1.073	Apr. 27	1930	*1240	35.1	4.19	1.277
Nov. 26	0845	786	22.3	3.55	1.082	July 29	0815	931	26.4	3.75	1.143

Minimum daily discharge, 0.23 ft³/s (0.007 m³/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	1.7	2.4	1.8	1.5	1.1	6.5	51	1.7	1.1	.93	.36
2	6.1	2.4	2.2	1.8	1.5	1.4	4.2	20	1.8	.92	.81	.31
3	31	20	2.1	1.7	1.5	1.4	3.8	11	7.8	7.1	2.6	.36
4	3.4	2.6	2.1	1.8	1.6	1.4	16	4.4	2.2	1.4	1.4	.24
5	44	2.1	2.0	2.1	1.5	6.5	3.4	3.6	1.5	1.1	6.1	2.2
6	5.0	1.9	2.4	2.3	1.5	2.8	3.2	2.9	1.6	.90	1.6	.55
7	2.9	1.8	2.7	2.7	1.5	2.1	3.4	3.1	5.5	.74	.72	.39
8	2.4	1.7	1.9	2.0	1.6	5.8	3.4	3.8	5.2	3.5	.71	.33
9	22	1.8	1.8	2.0	1.6	4.1	40	2.6	1.5	1.1	.65	.31
10	126	22	1.8	1.8	1.8	2.2	3.8	2.3	3.0	.80	.93	.28
11	8.1	19	1.8	29	1.6	3.0	3.2	2.5	1.4	.73	5.9	.24
12	18	12	1.8	16	1.5	1.8	3.2	6.0	1.2	.66	1.4	.23
13	6.8	5.0	9.0	3.0	1.3	91	2.8	3.2	1.2	.60	.64	.31
14	3.7	4.4	2.8	2.8	1.5	27	11	2.1	1.2	.56	.51	.36
15	2.9	2.7	2.1	2.5	1.5	5.1	3.2	1.8	2.3	.54	.59	.33
16	2.7	2.4	2.1	2.2	4.0	3.3	2.3	1.7	6.8	4.5	1.1	.26
17	2.6	2.2	2.0	2.1	1.7	5.8	2.3	1.7	1.5	2.0	.39	.33
18	2.4	2.1	1.6	56	1.4	10	2.3	22	1.2	.78	.64	6.8
19	2.3	2.0	1.7	15	1.4	3.2	2.2	3.8	1.1	.60	4.9	.64
20	2.2	2.0	1.7	4.1	1.5	2.7	2.2	4.9	1.1	.56	.99	.47
21	2.2	1.9	1.7	3.1	1.6	116	2.1	32	.99	19	.59	.47
22	2.0	1.9	1.8	10	5.5	7.5	2.0	4.6	.99	22	.55	.39
23	6.5	1.8	1.7	6.3	3.2	4.2	2.0	2.5	.99	4.4	.51	.33
24	3.9	1.8	2.1	2.8	3.0	6.7	3.2	2.3	.92	1.9	.43	.24
25	2.0	1.8	43	2.6	2.6	12	2.6	2.5	.92	1.0	.43	3.2
26	1.9	98	3.4	2.4	1.8	3.7	4.6	2.1	.85	.86	.39	.85
27	1.8	6.6	2.4	2.2	1.6	3.1	103	1.8	.85	.80	.36	.36
28	2.7	3.7	2.2	2.2	2.0	3.6	22	1.8	.79	.73	.39	.33
29	1.9	2.8	2.1	2.1	1.6	75	14	1.8	15	38	.39	.33
30	1.7	2.5	2.0	1.7	---	5.5	16	1.9	2.2	1.6	.39	.33
31	1.9	---	1.9	1.8	---	95	---	2.5	---	1.1	.36	---
TOTAL	396.0	234.6	112.3	189.9	55.9	514.0	293.9	210.2	75.30	121.58	38.30	22.13
MEAN	12.8	7.82	3.62	6.13	1.93	16.6	9.80	6.78	2.51	3.92	1.24	.74
MAX	126	96	43	56	5.5	116	103	51	15	38	6.1	6.8
MIN	1.7	1.7	1.6	1.7	1.3	1.1	2.0	1.7	.79	.54	.36	.23
CFSM	2.87	1.75	.81	1.37	.43	3.72	2.20	1.52	.56	.88	.28	.17
IN.	3.30	1.96	.94	1.58	.47	4.29	2.45	1.75	.63	1.01	.32	.18

CAL YR 1979 TOTAL 4682.72 MEAN 12.8 MAX 247 MIN .85 CFSM 2.87 IN 39.05
WTR YR 1980 TOTAL 2264.11 MEAN 6.19 MAX 126 MIN .23 CFSM 1.39 IN 18.88

01585400 BRIEN RUN AT STEMMERS RUN, MD

LOCATION.--Lat 39°20'01", long 76°28'23", Baltimore County, Hydrologic Unit 02060003, on right bank 0.2 mi (0.3 km) upstream from mouth and 0.3 mi (0.5 km) north of Stemmers Run.

DRAINAGE AREA.--1.97 mi² (5.10 km²).

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 8.80 ft (2.681 m) Baltimore County datum.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 2.60 ft³/s (0.074 m³/s), 17.92 in/yr (455 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,500 ft³/s (99.1 m³/s) Aug. 1, 1971, gage height, 10.75 ft (3.277 m), from high-water mark in well, from rating curve extended above 180 ft³/s (5.10 m³/s) on basis of computation of peak flow through culvert and over road at site 0.8 mile (1.3 km) upstream, adjusted for flow from intervening area; no flow at times many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 272 ft³/s (7.70 m³/s) Apr. 27, gage height, 3.62 ft (1.103 m), no other peak above base of 150 ft³/s (4.2 m³/s); minimum discharge, 0.41 ft³/s (0.012 m³/s) many days in July, August, and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	.95	.99	.85	.78	.80	5.5	15	.72	.61	.56	.41
2	2.4	1.1	.88	1.1	.72	.80	2.1	5.3	.66	.61	.50	.41
3	7.7	7.8	.92	.88	.72	.80	1.4	4.1	2.5	2.5	1.3	.50
4	1.4	1.3	.87	.85	.72	.80	4.8	1.3	.92	.57	.57	.41
5	13	1.0	.90	.90	.75	3.6	1.6	1.3	.76	.48	.62	.50
6	3.0	.96	1.0	1.2	.77	1.7	1.1	1.1	.79	.43	.54	.41
7	1.2	.94	1.0	1.3	.74	1.2	.99	1.1	2.9	.44	.46	.41
8	.95	.90	.87	1.2	.72	2.3	1.1	1.1	2.4	.95	.41	.41
9	6.5	.90	.85	1.1	.83	1.9	6.1	.85	.68	.57	.41	.41
10	45	7.8	.87	.87	.92	1.2	1.9	.72	.86	.56	.57	.50
11	3.8	5.0	.85	10	.85	1.2	1.4	.79	.72	.50	1.2	.50
12	6.0	4.4	.85	7.8	.77	.92	.99	1.5	.66	.50	1.3	.41
13	3.0	2.0	3.5	1.4	.78	25	.93	.93	.60	.50	.56	.41
14	1.4	1.8	1.3	1.4	.80	13	1.6	.75	.60	.50	.52	.41
15	1.3	1.2	1.0	1.1	.85	1.9	1.2	.72	1.4	.50	.56	.41
16	.99	1.0	1.1	1.0	1.8	1.1	.97	.68	1.9	1.9	.43	.41
17	1.1	.99	.96	1.0	.89	1.8	.85	.81	.69	.74	.41	.50
18	.94	.90	.81	20	.74	3.8	.79	6.3	.66	.51	.43	4.0
19	1.2	.85	.90	8.4	.77	1.3	.74	1.5	.62	.50	2.5	.50
20	.96	.85	.85	1.8	.89	1.3	.72	1.7	.60	.50	.50	.50
21	.97	.88	.85	1.2	.94	34	.72	14	.61	9.9	.41	.50
22	1.4	.85	.85	4.4	2.7	3.2	.72	2.1	.61	7.1	.41	.50
23	2.6	.89	.85	3.4	1.5	1.3	.77	.99	.61	2.7	.41	.50
24	1.6	.85	.96	1.3	1.6	3.0	1.2	.85	.61	1.2	.41	.56
25	.99	1.1	18	1.2	1.6	5.3	.86	.85	.72	.50	.41	1.7
26	.99	25	1.9	1.1	1.0	1.6	1.9	.72	.72	.85	.41	.56
27	.99	3.3	1.2	1.1	1.1	1.2	38	.99	.72	.50	.41	.50
28	1.4	1.6	.95	1.0	1.3	1.3	11	.72	.61	.41	.41	.50
29	1.0	1.1	.85	1.0	.98	30	4.9	.72	5.1	4.5	.41	.50
30	.90	.99	.85	.85	---	3.0	3.6	1.3	.85	.72	.41	.50
31	.90	---	.85	.85	---	26	---	1.9	---	.66	.41	---
TOTAL	131.58	79.20	49.38	81.55	29.45	176.32	100.45	72.49	32.80	43.41	18.86	18.72
MEAN	4.24	2.64	1.59	2.63	1.02	5.69	3.35	2.34	1.09	1.40	.61	.62
MAX	45	25	18	20	2.7	34	38	15	5.1	9.9	2.5	4.0
MIN	.90	.85	.81	.85	.72	.80	.72	.61	.60	.41	.41	.41
CFSM	2.15	1.34	.81	1.34	.52	2.89	1.70	1.19	.55	.71	.31	.32
IN.	2.48	1.49	.93	1.54	.56	3.33	1.90	1.37	.62	.82	.36	.35

CAL YR 1979 TOTAL 1619.19 MEAN 4.44 MAX 102 MIN .50 CFSM 2.25 IN 30.56
WTR YR 1980 TOTAL 834.21 MEAN 2.28 MAX 45 MIN .41 CFSM 1.16 IN 15.74

01585500 CRANBERRY BRANCH NEAR WESTMINSTER, MD

LOCATION.--Lat 39°35'35", long 76°58'05", Carroll County, Hydrologic Unit 02060003, on left bank 80 ft (24 m) upstream from culvert, 0.7 mi (1.1 km) upstream from mouth, and 1.8 mi (2.9 km) northeast of Westminster.

DRAINAGEA AREA.--3.29 mi² (8.52 km²).

PERIOD OF RECORD.--September 1949 to current year.

REVISED RECORDS.--WSP 1432: Drainage area, 1954-55. WDR MD-DE-75-1: 1972(M). WDR MD-DE-79-1: 1973-78(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 670 ft (204 m), from topographic map.

REMARKS.--Records good. Occasional small diversions to and releases from Cranberry Reservoir located offstream 1 mi (1.6 km) above station since August 1957, capacity, 113,700,000 gal (430,400 m³). Beginning October 1972 occasional large diversions past the gaging station from the reservoir through a 30-inch (0.76 m) pipe. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 3.60 ft³/s (0.102 m³/s), 14.86 in/yr (377 mm/yr), unadjusted for storage and diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,220 ft³/s (62.9 m³/s) Sept. 26, 1975, gage height, 7.47 ft (2.277 m), from rating curve extended above 200 ft³/s (5.66 m³/s) on the basis of computations of flows through culvert at gage heights 5.54 ft (1.689 m) and 7.47 ft (2.277 m); minimum daily, 0.27 ft³/s (0.008 m³/s) Dec. 3, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 80 ft³/s (2.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	0900	*942	26.7	5.27	1.606	June 7	2130	257	7.28	3.57	1.088

Minimum daily, 0.39 ft³/s (0.011 m³/s) Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	2.4	3.3	2.5	1.7	.51	7.1	12	1.9	3.4	2.2	.46
2	7.6	3.9	3.2	2.5	1.7	.54	2.8	7.7	3.4	3.2	1.3	.39
3	13	5.2	3.0	2.5	1.6	.54	1.7	7.2	3.4	4.0	1.5	.46
4	6.6	2.9	3.1	2.5	1.6	.52	3.0	5.8	3.3	3.4	1.6	.46
5	12	2.5	3.0	2.6	1.6	2.7	1.7	5.4	3.1	2.5	1.8	.74
6	6.2	2.4	3.1	2.5	1.7	1.7	1.5	4.3	2.7	1.9	2.1	.60
7	5.4	2.4	3.1	2.5	1.8	.60	3.1	5.4	21	2.7	2.1	.67
8	5.6	2.7	2.9	2.5	1.8	.66	4.2	5.2	11	3.6	2.0	1.3
9	10	3.8	2.8	2.5	1.9	.63	13	5.0	5.6	3.2	1.9	2.0
10	40	4.5	2.8	2.4	1.9	.62	6.2	4.7	7.1	2.3	2.2	2.0
11	10	5.4	2.8	4.0	1.8	.61	5.2	4.8	4.3	2.1	2.8	2.1
12	6.8	5.0	2.8	4.6	1.8	.57	5.5	8.0	2.7	2.3	2.6	2.4
13	5.0	5.1	4.1	2.4	1.7	1.7	5.2	6.0	2.9	2.7	1.8	2.3
14	3.8	4.5	3.2	3.1	1.8	5.8	6.8	4.9	2.8	2.0	2.1	2.3
15	3.2	3.8	2.8	2.8	1.8	7.7	7.4	3.0	2.6	2.6	2.2	2.3
16	3.0	3.6	2.9	1.3	2.1	7.1	5.4	2.9	9.7	1.7	2.1	2.3
17	2.7	3.4	2.7	1.2	1.8	9.4	5.0	3.5	4.8	2.0	2.0	1.8
18	2.6	3.3	2.5	5.8	1.7	7.0	4.8	8.1	4.5	2.0	1.7	1.5
19	2.4	3.2	2.6	5.8	1.7	4.1	4.6	4.9	4.2	2.4	2.9	.83
20	2.5	3.2	2.6	3.1	1.9	3.6	4.6	6.0	4.1	1.7	2.3	.67
21	2.5	3.0	2.7	2.6	2.1	23	4.4	17	2.7	2.3	1.6	.91
22	2.3	3.2	2.8	2.7	4.1	7.8	4.3	6.9	1.8	3.8	.98	.53
23	5.3	3.1	2.9	2.7	3.7	5.3	4.5	4.7	2.2	3.7	.59	.46
24	4.1	3.0	2.9	2.2	3.5	3.9	4.2	5.6	2.4	2.6	.53	.99
25	3.3	3.0	5.8	2.3	2.4	4.5	4.1	4.1	2.2	1.7	.57	1.5
26	3.0	11	3.3	2.2	.92	1.0	4.3	3.3	2.3	1.8	.57	1.4
27	2.8	4.8	2.9	2.1	.58	.94	11	2.9	2.2	1.5	.60	1.4
28	3.3	4.0	2.7	2.2	.55	1.1	9.0	2.7	2.4	1.3	.72	1.3
29	2.8	3.6	2.7	2.1	.51	7.7	8.7	2.9	3.4	1.4	.69	1.3
30	2.6	3.3	2.6	1.9	---	2.8	6.9	3.2	4.2	1.8	.79	1.3
31	2.5	---	2.6	1.9	---	9.6	---	2.6	---	1.7	2.5	---
TOTAL	308.9	115.2	93.2	84.0	53.76	124.24	160.2	170.7	130.9	75.3	51.34	38.67
MEAN	9.96	3.84	3.01	2.71	1.85	4.01	5.34	5.51	4.36	2.43	1.66	1.29
MAX	126	11	5.8	5.8	4.1	23	13	17	21	4.0	2.9	2.4
MIN	2.3	2.4	2.5	1.2	.51	.51	1.5	2.6	1.8	1.3	.53	.39
CFSM	3.03	1.17	.92	.82	.56	1.22	1.62	1.68	1.33	.74	.51	.39
IN.	3.49	1.30	1.05	.95	.61	1.40	1.81	1.93	1.48	.85	.58	.44

CAL YR 1979 TOTAL 1707.83 MEAN 4.68 MAX 126 MIN .46 CFSM 1.42 IN 19.38
WTR YR 1980 TOTAL 1406.41 MEAN 3.84 MAX 126 MIN .39 CFSM 1.17 IN 15.90

01586000 NORTH BRANCH PATAPSCO RIVER AT CEDARHURST, MD

LOCATION.--Lat 39°30'00", long 76°53'00", Carroll County, Hydrologic Unit 02060003, on left bank at downstream side of private footbridge at Cedarhurst, 0.8 mi (1.3 km) downstream from Roaring Run, 8 mi (12.9 km) southeast of Westminster, and 16.5 mi (26.5 km) upstream from confluence with South Branch.

DRAINAGE AREA.--56.6 mi² (146.6 km²).

PERIOD OF RECORD.--September 1945 to current year.

REVISED RECORDS.--WSP 1903: 1959-60.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 425 ft (130 m), from topographic map.

REMARKS.--Records good. Slight diurnal fluctuation at low and medium flow caused by mill above station. Low flow affected slightly by Cranberry Reservoir since August 1957, capacity, 113,700,000 gal (430,400 m³). Records do not include a mean discharge of 2.17 ft³/s (0.061 m³/s) diverted above station for municipal supply of Westminster; sewage effluent discharged into Little Pipe Creek in Monocacy River basin. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 years, 65.5 ft³/s (1.855 m³/s), 15.71 in/yr (399 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,800 ft³/s (787 m³/s) June 22, 1972, gage height, 20.75 ft (6.325 m), from high-water mark in well, from rating curve extended above 4,100 ft³/s (116 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 1.9 ft³/s (0.054 m³/s) Sept. 10, 1966, result of filling pond above station; minimum daily, 3.1 ft³/s (0.088 m³/s) Sept. 10, 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1200	*6870	195	11.27	3.435	June 7	2330	1230	34.8	4.51	1.375
Oct. 10	0515	1420	40.2	4.92	1.500	June 8	1000	1030	29.2	4.08	1.244

Minimum discharge, 9.9 ft³/s (0.28 m³/s) July 29, gage height, 1.31 ft (0.399 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1800	76	72	53	40	35	170	196	64	48	30	26
2	223	82	71	48	40	37	133	127	70	43	29	22
3	310	118	65	47	43	38	119	125	66	64	28	24
4	160	84	65	46	41	38	135	101	63	50	27	20
5	265	76	65	50	40	52	109	98	56	44	26	22
6	154	76	65	49	39	52	98	101	56	40	26	21
7	134	73	66	50	40	42	92	101	130	38	26	20
8	118	71	61	47	40	52	90	91	330	47	24	18
9	163	73	57	46	41	64	162	81	86	44	23	20
10	739	84	57	46	43	45	106	80	105	41	24	20
11	257	93	57	58	43	52	88	78	78	38	43	19
12	206	110	56	95	40	42	84	98	66	35	34	19
13	179	90	82	55	40	58	84	105	62	35	27	18
14	154	95	71	55	40	166	98	73	60	33	26	18
15	142	81	61	67	39	134	128	67	59	32	27	19
16	131	77	61	54	44	126	93	62	128	33	28	19
17	126	72	57	50	41	151	84	62	70	31	25	19
18	115	71	53	87	40	151	81	120	62	31	26	22
19	110	66	54	137	40	103	79	110	59	30	42	18
20	105	64	54	78	39	93	77	103	57	30	31	18
21	100	63	54	66	41	397	74	213	51	28	28	20
22	96	63	57	64	65	160	71	117	48	102	27	18
23	103	63	60	67	59	126	74	90	47	78	27	17
24	123	62	61	55	57	108	70	134	47	50	25	15
25	93	61	108	54	50	110	69	100	46	36	23	21
26	89	205	71	52	44	87	68	82	45	33	22	20
27	84	113	61	50	39	78	141	73	44	32	21	18
28	93	87	56	48	39	76	130	71	42	31	20	17
29	87	81	54	47	36	173	164	64	56	46	20	16
30	82	74	54	43	---	110	113	64	65	34	21	17
31	78	---	53	43	---	185	---	82	---	31	53	---
TOTAL	6619	2504	1939	1807	1243	3141	3084	3069	2218	1288	859	581
MEAN	214	83.5	62.5	58.3	42.9	101	103	99.0	73.9	41.5	27.7	19.4
MAX	1800	205	108	137	65	397	170	213	330	102	53	26
MIN	78	61	53	43	36	35	68	62	42	28	20	15
CFSM	3.78	1.48	1.10	1.03	.76	1.78	1.82	1.75	1.31	.73	.49	.34
IN.	4.35	1.65	1.27	1.19	.82	2.06	2.03	2.02	1.46	.85	.56	.38

CAL YR 1979 TOTAL 41891 MEAN 115 MAX 1830 MIN 30 CFSM 2.03 IN 27.53
WTR YR 1980 TOTAL 28352 MEAN 77.5 MAX 1800 MIN 15 CFSM 1.37 IN 18.63

01587500 SOUTH BRANCH PATAPSCO RIVER AT HENRYTON, MD

LOCATION.--Lat 39°21'05", long 76°54'50", Howard County, Hydrologic Unit 02060003, on right bank at downstream side of bridge on Henryton Road at Henryton, 1.3 mi (2.1 km) upstream from Piney Run, 2.5 mi (4.0 km) upstream from confluence with North Branch, and 3.2 mi (5.1 km) southeast of Sykesville.

DRAINAGE AREA.--64.4 mi² (166.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1948 to September 1980 (discontinued).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 289.15 ft (88.133 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for October, November, and March, which are fair.

AVERAGE DISCHARGE.--32 years, 75.0 ft³/s (2.124 m³/s), 15.82 in/yr (402 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,900 ft³/s (762 m³/s) June 22, 1972, gage height, 28.14 ft (8.577 m), from floodmarks, from rating curve extended above 1,900 ft³/s (53.8 m³/s) on basis of slope-area measurements at gage height 7.88 ft (2.402 m) and 28.14 ft (8.577 m), and contracted-opening measurements at gage heights 10.12 ft (3.085 m) and 19.40 ft (5.913 m); minimum, 0.40 ft³/s (0.011 m³/s) Sept. 9-12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 950 ft³/s (26 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1330	*5740	163	12.87	3.923	Oct. 10	0700	1520	43.0	5.44	1.658

Minimum discharge, 15 ft³/s (0.42 m³/s) Sept. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1740	98	91	69	68	54	220	246	98	55	37	22
2	320	105	90	69	66	54	175	159	90	53	39	20
3	376	150	87	68	66	58	148	182	99	72	36	18
4	210	120	87	69	65	62	157	136	107	59	35	17
5	300	100	87	72	65	68	132	122	84	53	33	20
6	230	94	87	71	63	76	118	112	82	51	31	21
7	200	90	86	71	63	66	112	107	95	47	30	21
8	175	88	81	68	63	70	107	106	93	55	28	18
9	250	88	79	68	63	74	214	103	78	57	27	17
10	728	90	79	65	68	64	163	99	88	55	26	18
11	343	100	79	80	74	76	129	100	79	49	44	16
12	314	170	79	137	66	62	119	113	73	46	36	16
13	272	130	103	82	66	114	117	149	71	44	30	16
14	186	140	96	81	66	240	129	101	69	42	28	16
15	167	110	81	92	61	153	173	92	69	41	30	16
16	164	100	80	80	66	129	121	86	95	41	35	16
17	156	94	77	77	62	130	108	83	76	40	27	17
18	147	90	72	116	64	152	104	153	69	39	29	24
19	142	86	74	206	62	108	103	121	67	37	43	20
20	133	86	75	107	59	100	100	150	65	36	36	17
21	124	84	74	96	62	361	98	263	62	35	31	18
22	115	84	75	93	76	181	93	155	61	128	30	18
23	109	82	75	97	73	130	93	121	59	91	29	16
24	165	82	76	82	75	109	91	241	59	51	27	15
25	123	82	117	82	71	103	91	159	58	44	26	20
26	115	200	88	79	66	97	94	111	57	42	25	23
27	110	123	78	75	61	90	181	102	56	40	23	17
28	115	104	75	75	61	86	194	103	54	39	22	17
29	105	98	73	74	60	250	205	96	75	41	22	17
30	105	93	72	69	---	150	141	92	69	39	22	17
31	100	---	71	68	---	300	---	121	---	37	22	---
TOTAL	7839	3161	2544	2638	1901	3767	4030	4084	2257	1559	939	544
MEAN	253	105	82.1	85.1	65.6	122	134	132	75.2	50.3	30.3	18.1
MAX	1740	200	117	206	76	361	220	263	107	128	44	24
MIN	100	82	71	65	59	54	91	83	54	35	22	15
CFSM	3.93	1.63	1.28	1.32	1.02	1.89	2.08	2.05	1.17	.78	.47	.28
IN.	4.53	1.83	1.47	1.52	1.10	2.18	2.33	2.36	1.30	.90	.54	.31

CAL YR 1979 TOTAL 53434 MEAN 146 MAX 1960 MIN 41 CFSM 2.27 IN 30.87
WTR YR 1980 TOTAL 35263 MEAN 96.3 MAX 1740 MIN 15 CFSM 1.50 IN 20.37

01587500 SOUTH BRANCH PATAPSCO RIVER AT HENRYTON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-74, 1976 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
DEC 28...	1200	75	115	7.7	--	4.0	5	41	7	11	3.4
MAR 05...	1000	68	180	7.5	6.5	1.0	5	37	3	9.7	3.2
JUN 06...	1040	82	132	7.5	--	17.0	0	42	15	11	3.6
AUG 19...	1400	49	163	7.6	--	21.0	4	50	11	14	3.6

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
DEC 28...	6.1	31	.4	2.0	34	7.8	12	.2	8.0	78	71
MAR 05...	15	45	1.1	1.4	34	7.1	25	.1	7.9	99	90
JUN 06...	7.6	27	.5	1.7	27	6.6	11	.2	7.4	96	65
AUG 19...	8.2	25	.5	2.6	39	4.5	12	.3	8.5	93	77

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
DEC 28...	.11	15.8	2.8	.220	.67	160	90	70	40	0	40
MAR 05...	.13	18.2	2.9	.030	.09	240	180	60	40	0	40
JUN 06...	.13	20.8	2.6	.100	.31	540	450	90	60	10	50
AUG 19...	.13	12.3	2.3	.420	1.3	1100	1000	100	90	50	40

01589000 PATAPSCO RIVER AT HOLLOFIELD, MD

LOCATION.--Lat 39°18'36", long 76°47'34", Baltimore County, Hydrologic Unit 0206003, on left bank at downstream side of highway bridge at Hollofield, 0.3 mi (0.5 km) downstream from Dogwood Run, 3.0 mi (4.8 km) north of Ellicott City, and 28 mi (45 km) upstream from mouth.

DRAINAGE AREA.--285 mi² (738 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 187.7 ft (57.21 m) National Geodetic Vertical Datum of 1929. June 26 to Dec. 8, 1972, nonrecording gage at same site and datum. Prior to June 22, 1972, water-stage recorder at site on opposite bank at same datum.

REMARKS.--Water-discharge records good except those for February and March, which are fair. Flow regulated by Liberty Reservoir 11 mi (18 km) upstream beginning July 22, 1954, usable capacity, 42,070,000,000 gal (159.2 hm³); dead storage, 1,260,000,000 gal (4.769 hm³). Diversions above station for municipal supply of Westminster (sewage effluent discharged into Little Pipe Creek), and from Liberty Reservoir beginning Feb. 26, 1953, for municipal supply of Baltimore, and beginning February 1970 for a small municipal supply for part of Carroll County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,600 ft³/s (2,280 m³/s) June 22, 1972, gage height, 31.3 ft (9.54 m), from floodmarks, from rating curve extended above 27,000 ft³/s (765 m³/s) on basis of slope-area measurement of peak flow; minimum, 6 ft³/s (0.17 m³/s) Sept. 6, 1944; minimum daily, 9.6 ft³/s (0.27 m³/s) Aug. 12, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,900 ft³/s (280 m³/s) Oct. 1, gage height, 9.20 ft (2.804 m); minimum, 25 ft³/s (0.71 m³/s) Sept. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4310	237	198	141	125	105	760	911	218	100	62	38
2	2540	251	196	138	120	110	606	688	191	103	67	35
3	1710	392	180	136	120	110	486	869	221	149	72	32
4	1020	342	168	132	115	130	514	583	257	119	65	30
5	963	311	170	139	117	153	441	438	186	93	58	41
6	861	289	164	133	119	157	333	361	165	89	55	38
7	582	277	167	140	121	130	305	312	176	81	53	38
8	442	267	165	141	120	139	285	291	269	103	49	34
9	470	200	161	134	120	160	525	270	303	115	47	32
10	2570	261	154	123	130	135	549	240	251	98	45	31
11	1880	291	154	164	140	155	420	226	215	88	72	30
12	1300	404	154	280	120	135	346	241	172	78	62	29
13	1070	304	182	172	120	321	330	397	148	72	58	29
14	754	324	202	163	120	576	322	288	133	68	49	28
15	595	263	169	170	115	299	453	236	139	67	49	29
16	515	247	163	160	129	245	366	200	175	65	58	28
17	463	215	181	152	120	225	290	181	161	65	43	28
18	418	207	155	222	120	285	263	327	137	63	42	42
19	377	196	151	403	120	204	247	299	129	59	67	39
20	349	187	151	212	115	184	230	406	120	58	65	33
21	331	182	151	188	115	818	226	749	118	58	54	33
22	321	174	151	185	132	456	211	581	115	137	52	34
23	313	172	151	195	140	303	201	401	119	262	51	30
24	426	172	151	164	151	269	193	911	123	99	50	27
25	335	172	212	161	133	269	189	735	114	80	46	35
26	303	474	180	156	120	234	195	449	101	75	42	42
27	276	454	161	150	115	216	354	320	102	72	41	32
28	270	327	154	148	115	209	601	259	95	70	39	29
29	279	268	149	146	115	537	759	221	130	72	38	29
30	264	222	146	130	---	280	535	196	160	67	38	30
31	247	---	145	131	---	612	---	247	---	62	37	---
TOTAL	26554	8082	5136	5209	3562	8161	11535	12833	4943	2787	1626	985
MEAN	857	269	166	168	123	263	385	414	165	89.9	52.5	32.8
MAX	4310	474	212	403	151	818	760	911	303	262	72	42
MIN	247	172	145	123	115	105	189	181	95	58	37	27
(≠)	43350	43290	43020	42710	41740	43390	43440	43390	42320	40770	37600	33660
(♦)	230	224	219	222	222	220	224	232	243	228	240	235

CAL YR 1979 TOTAL 127342 MEAN 349 MAX 5010 MIN 78 ♦ 238
WTR YR 1980 TOTAL 91413 MEAN 250 MAX 4310 MIN 27 ♦ 228

≠ Month-end contents, in millions of gallons in Liberty Reservoir, contents on Sept. 30, 1979: 43,260,000,000 gal (163.7 hm³); records furnished by Baltimore Department of Public Works.

♦ Diversions, in cubic feet per second, above station for municipal supply of city of Westminster; and from Liberty Reservoir for municipal supply of city of Baltimore, and for part of Carroll County. Records furnished by cities of Westminster and Baltimore, respectively.

01589000 PATAPSCO RIVER AT HOLLOFIELD, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-74, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
DEC 28...	1245	153	155	8.1	--	4.0	5	49	14	13	4.0
MAR 05...	1100	113	178	7.6	5.5	1.5	5	47	8	12	4.1
JUN 06...	0945	158	150	7.8	--	19.0	2	52	15	14	4.1
AUG 19...	1500	66	181	7.7	--	23.0	5	62	9	17	4.8

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
DEC 28...	6.1	28	.4	2.0	35	11	11	.1	10	90	78
MAR 05...	12	35	.8	1.7	39	10	20	.1	11	103	94
JUN 06...	7.1	22	.4	1.8	37	8.6	11	.1	9.3	105	78
AUG 19...	7.9	21	.4	2.5	53	6.8	12	.2	12	99	95

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
DEC 28...	.12	37.2	2.1	.070	.21	210	140	70	50	0	50
MAR 05...	.14	31.4	2.4	.190	.58	190	130	60	60	0	60
JUN 06...	.14	44.8	2.0	.060	.18	780	700	80	130	30	100
AUG 19...	.13	17.7	1.5	.130	.40	940	880	60	190	70	120

01589100 EAST BRANCH HERBERT RUN AT ARBUTUS, MD

LOCATION.--Lat 39°14'24", long 76°41'33", Baltimore County, Hydrologic Unit 02060003, on right bank at downstream side of bridge on Tom Day Boulevard at U.S. Route 1 in Arbutus, 0.5 mi (0.8 km) upstream from mouth, and 2 mi (3 km) south of Baltimore city limits.

DRAINAGE AREA.--2.47 mi² (6.40 km²).

PERIOD OF RECORD.--August 1957 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 45 ft (14 m), from topographic map.

REMARKS.--Records fair except those for period of missing record, Apr. 23 to June 27, which are poor. Slight regulation at low flow from unknown source above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years, 3.38 ft³/s (0.096 m³/s), 18.58 in/yr (472 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,460 ft³/s (69.7 m³/s) Sept. 6, 1979, gage height, 6.2 ft (1.89 m), from rating curve extended above 280 ft³/s (7.93 m³/s) on basis of culvert measurement at gage height 3.67 ft (1.119 m), discharge, 580 ft³/s (16.4 m³/s) and culvert and flow-over-road measurement of peak flow at gage height 6.2 ft (1.89 m) in gage well, 6.8 ft (2.07 m) from floodmarks; maximum gage height, 6.35 ft (1.935 m) June 22, 1972; minimum daily, 0.30 ft³/s (0.008 m³/s) July 24, Sept. 4, 11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	Unknown	Unknown		Unknown		June 29	1615	*801	22.7	4.12	1.256
Oct. 10	Unknown	Unknown		Unknown		July 21	2030	541	15.3	3.60	1.097

Minimum daily, 0.51 ft³/s (0.014 m³/s) Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	2.0	1.5	1.3	1.6	.91	4.0	16	2.4	1.1	.96	.91
2	6.0	2.6	1.4	1.3	1.3	1.1	3.0	4.4	1.8	1.1	.92	.91
3	8.0	4.8	1.3	1.3	1.3	1.3	2.6	3.4	10	7.1	6.4	1.1
4	4.0	1.7	1.3	1.4	1.3	1.2	4.8	3.0	2.0	1.1	.91	1.2
5	7.0	1.6	1.3	1.8	1.4	3.5	2.5	2.8	1.4	.91	.91	1.3
6	2.8	1.6	1.4	1.8	1.3	1.3	2.3	2.6	1.6	.91	.91	.91
7	2.4	1.6	1.4	1.8	1.3	1.3	2.3	2.8	1.5	.91	.91	.71
8	2.2	2.0	1.3	1.6	1.3	3.1	2.3	3.0	1.4	2.4	.91	.51
9	14	2.0	1.1	1.4	1.3	1.5	13	2.6	1.4	1.4	.91	.54
10	30	13	1.1	1.4	1.6	1.3	3.0	2.2	2.0	1.1	7.0	1.1
11	4.0	13	1.3	15	1.3	1.2	2.2	2.4	1.3	.91	1.4	.75
12	7.0	2.3	1.3	4.0	1.3	1.1	2.2	2.8	1.2	.75	.93	.75
13	2.9	4.2	6.5	1.8	1.3	39	2.0	2.2	1.2	.75	.75	.75
14	2.3	2.0	1.4	2.0	1.3	8.4	3.0	2.0	1.2	.75	.75	.75
15	2.3	2.0	1.4	1.6	1.3	2.3	2.2	1.8	1.6	.90	1.7	.81
16	2.4	1.5	1.3	1.6	2.2	2.0	2.0	1.8	8.0	1.0	.89	.91
17	2.4	1.5	1.4	1.6	1.3	4.0	2.0	1.8	1.4	1.1	.75	1.9
18	2.3	1.5	1.4	28	1.3	4.8	2.0	14	1.3	1.2	.76	3.0
19	2.0	1.5	1.4	4.4	1.3	1.9	2.0	4.0	1.2	1.3	2.9	.75
20	2.0	1.5	1.4	2.0	1.3	1.8	2.0	6.0	1.1	1.2	.86	.75
21	1.8	1.5	2.0	1.8	1.3	32	2.0	4.0	1.1	23	.75	.75
22	1.8	1.5	1.4	5.3	3.8	2.9	2.0	3.0	1.1	7.2	.75	.92
23	4.1	1.5	1.3	2.2	1.4	2.3	2.4	2.8	1.1	1.4	.75	1.2
24	2.0	1.6	1.6	1.4	1.8	4.6	2.6	8.0	1.1	.98	.75	1.3
25	1.8	1.6	13	1.4	2.2	3.1	2.0	3.0	1.1	.91	.75	3.9
26	1.8	22	1.4	1.4	1.4	2.0	5.0	2.2	1.2	.91	.75	1.1
27	1.8	2.0	1.3	1.4	1.4	1.9	20	2.0	1.1	.91	.75	.91
28	2.1	1.7	1.3	1.4	1.6	3.9	24	1.8	1.1	1.1	.75	.91
29	2.0	1.6	1.3	1.4	1.2	20	7.0	1.6	21	1.2	.82	1.0
30	2.1	1.6	1.3	1.3	---	2.8	4.0	1.4	1.3	.91	.91	1.1
31	2.2	---	1.3	1.4	---	22	---	2.0	---	.78	.91	---
TOTAL	159.5	100.5	59.1	97.5	43.7	180.51	132.4	113.4	76.2	67.19	41.07	33.40
MEAN	5.15	3.35	1.91	3.15	1.51	5.82	4.41	3.66	2.54	2.17	1.32	1.11
MAX	30	22	13	28	3.8	39	24	16	21	23	7.0	3.9
MIN	1.8	1.5	1.1	1.3	1.2	.91	2.0	1.4	1.1	.75	.75	.51
CFSM	2.09	1.36	.77	1.28	.61	2.36	1.79	1.48	1.03	.88	.53	.45
IN.	2.40	1.51	.89	1.47	.66	2.72	1.99	1.71	1.15	1.01	.62	.50

CAL YR 1979 TOTAL 2527.04 MEAN 6.92 MAX 200 MIN .90 CFSM 2.80 IN 38.04
WTR YR 1980 TOTAL 1104.47 MEAN 3.02 MAX 39 MIN .51 CFSM 1.22 IN 16.63

01589300 GWYNNS FALLS AT VILLA NOVA, MD

LOCATION.--Lat 39°20'45", long 76°44'01", Baltimore County, Hydrologic Unit 02060003, on right bank 300 ft (91 m) downstream from bridge on Essex Road, 300 ft (91 m) north of State Highway 26 (Liberty Road), in Villa Nova, 1.1 mi (1.8 km) west of Baltimore city limits, and 11.5 mi (18.5 km) upstream from mouth.

DRAINAGE AREA.--32.5 mi² (84.2 km²).

PERIOD OF RECORD.--February 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 361.32 ft (110.130 m) Baltimore County datum. Prior to Aug. 27, 1963, and Oct. 25, 1972, to Sept. 20, 1973, water-stage recorder, and June 26, 1972, to Oct. 24, 1972, non-recording gage at site 300 ft (91 m) upstream at same datum.

REMARKS.--Records good. Slight diurnal fluctuation at times from unknown source above station. Small diversion for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years, 39.1 ft³/s (1.107 m³/s), 16.34 in/yr (415 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,200 ft³/s (459 m³/s) June 22, 1972, gage height, 21.5 ft (6.55 m), from floodmarks, from rating curve extended above 2,200 ft³/s (62.3 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 1.7 ft³/s (0.048 m³/s) Sept. 7, 8, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 21, 1956, reached a stage of 12.6 ft (3.84 m), discharge, 5,270 ft³/s (149 m³/s) on basis of contracted-opening measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft³/s (21 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1530	*2860	81.0	8.51	2.594
Oct. 10	0730	1130	32.0	5.01	1.527
Mar. 13	2245	1060	30.0	4.82	1.469
Mar. 21	1515	804	22.8	4.11	1.253
May 24	1945	1480	41.9	5.81	1.771

Minimum discharge, 7.7 ft³/s (0.22 m³/s) Aug. 25, Sept. 12, 22, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	938	38	39	33	27	23	111	220	44	23	15	11
2	89	42	38	32	27	23	61	98	36	23	14	11
3	191	67	36	32	27	23	51	107	74	51	21	10
4	61	45	36	32	27	24	94	56	49	26	16	10
5	169	41	36	34	27	50	52	46	32	22	13	20
6	68	40	36	34	27	38	45	42	29	21	13	17
7	50	40	37	33	28	30	43	38	32	18	13	11
8	44	40	34	32	28	34	41	42	67	33	12	9.7
9	85	40	33	32	26	42	111	38	33	25	12	9.4
10	619	97	34	31	26	30	58	35	38	22	14	9.5
11	119	95	34	98	25	40	45	35	31	20	27	8.7
12	109	83	34	98	24	27	43	60	28	19	24	8.3
13	81	58	66	41	23	245	43	74	27	18	14	8.3
14	57	58	45	39	23	296	53	38	26	18	12	8.3
15	51	43	37	37	23	81	68	34	26	17	14	8.5
16	49	40	36	33	29	55	43	32	46	18	15	8.3
17	47	38	34	32	24	71	37	31	29	18	12	8.6
18	45	38	32	127	24	90	37	127	26	18	13	23
19	45	36	33	124	23	47	37	73	25	17	60	11
20	43	35	33	43	22	41	37	91	24	16	20	9.5
21	43	35	33	37	24	404	37	182	22	26	15	9.5
22	42	35	33	44	40	85	36	66	22	78	14	9.2
23	54	35	34	47	31	53	44	46	22	44	14	9.4
24	60	35	35	33	34	49	38	436	22	21	13	8.5
25	42	36	78	33	29	58	37	108	22	17	12	21
26	41	210	40	32	28	41	49	53	21	16	12	13
27	39	64	36	30	24	38	153	43	22	15	12	9.7
28	47	47	34	30	24	40	162	38	21	16	12	9.4
29	43	42	33	30	24	203	174	35	69	19	11	9.4
30	40	40	33	29	---	63	81	33	38	16	11	9.4
31	39	---	33	29	---	273	---	81	---	15	11	---
TOTAL	3450	1593	1165	1371	768	2617	1921	2438	1003	726	491	329.6
MEAN	111	53.1	37.6	44.2	26.5	84.4	64.0	78.6	33.4	23.4	15.8	11.0
MAX	938	210	78	127	40	404	174	436	74	78	60	23
MIN	39	35	32	29	22	23	36	31	21	15	11	8.3
CFSM	3.42	1.63	1.16	1.36	.82	2.60	1.97	2.42	1.03	.72	.49	.34
IN.	3.95	1.82	1.33	1.57	.88	3.00	2.20	2.79	1.15	.83	.56	.38

CAL YR 1979 TOTAL 28717.0 MEAN 78.7 MAX 2180 MIN 17 CFSM 2.42 IN 32.87
WTR YR 1980 TOTAL 17872.6 MEAN 48.8 MAX 938 MIN 8.3 CFSM 1.50 IN 20.46

01589330 DEAD RUN AT FRANKLINTOWN, MD

LOCATION.--Lat 39°18'40", long 76°43'02", Baltimore County, Hydrologic Unit 02060003, on right bank at downstream side of bridge on Colonial Road at Security Boulevard at Franklintown, 0.3 mi (0.5 km) west of Baltimore city limits, 1.2 mi (1.9 km) southwest of Woodlawn, and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--5.52 mi^2 (14.30 km^2).

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 310 ft (94 m), from topographic map.

REMARKS.--Records good. Occasional regulation at low flow from unknown source above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years, 7.87 ft^3/s (0.223 m^3/s), 19.36 in/yr (492 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft^3/s (210 m^3/s) June 22, 1972, gage height, 12.5 ft (3.81 m), from floodmarks, from rating curve extended above 1,600 ft^3/s (45.3 m^3/s) on basis of contracted-opening measurement of peak flow at bridge 0.6 mi (1.0 km) downstream, adjusted for flow from intervening area; minimum, 0.10 ft^3/s (0.003 m^3/s) Sept. 11-12, 1966, gage height, 0.57 ft (0.174 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 650 ft^3/s (18 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 1	0900	*1570	44.5	6.68	2.036	June 3	1715	676	19.1	4.03	1.228
Mar. 13	1930	776	22.0	4.39	1.338	Aug. 3	1745	722	20.4	4.20	1.280

Minimum discharge, 0.38 ft^3/s (0.011 m^3/s) Sept. 12, 13, 14, gage height 0.66 ft (0.201 m).

REVISIONS.--The minimum discharge for water year 1979 has been revised to 0.21 ft^3/s (0.006 m^3/s) Oct. 25, 1978. This supersedes the figure published in the report for 1979.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	2.6	2.3	1.4	1.8	1.6	19	66	5.1	1.0	.91	.54
2	23	8.2	2.1	1.5	1.6	1.6	6.1	29	2.3	1.1	.77	.59
3	52	25	2.0	1.4	1.6	1.8	4.6	17	39	23	38	.59
4	5.1	2.1	2.2	1.7	1.6	1.4	25	4.7	3.4	1.4	2.1	.69
5	36	2.0	2.0	2.1	1.8	17	4.2	4.0	1.8	1.0	1.0	9.5
6	4.5	2.0	2.2	2.5	1.6	3.1	3.5	3.5	2.2	.92	.89	.89
7	3.6	2.0	2.2	2.5	1.6	2.4	3.4	4.8	2.2	.83	.95	1.3
8	2.9	2.1	1.8	2.6	1.4	17	3.2	6.1	1.7	13	.83	.51
9	79	2.4	1.6	2.1	1.4	5.8	43	3.7	1.7	4.2	.78	.54
10	180	52	1.8	1.6	2.5	2.8	5.8	2.7	5.0	2.2	6.6	2.3
11	15	46	1.8	49	1.6	3.7	3.7	3.6	1.5	.97	5.6	.72
12	34	14	1.9	21	1.9	1.9	3.4	5.7	1.4	.82	1.1	.59
13	9.0	19	23	2.9	1.9	117	3.0	3.9	1.3	.71	.95	.44
14	4.0	8.5	2.5	3.5	1.6	69	19	2.5	1.4	.67	.98	.48
15	3.5	3.4	1.7	2.8	1.6	7.5	11	2.3	3.6	.82	4.4	.61
16	3.2	3.0	1.7	2.3	7.6	3.5	3.1	2.3	13	.97	1.6	.53
17	2.9	2.6	1.7	2.0	1.4	17	2.8	2.2	1.6	.99	.64	.53
18	2.8	2.5	1.5	76	1.4	26	2.6	48	1.4	.78	.81	14
19	2.9	2.4	1.6	22	1.6	3.5	2.5	10	1.3	.71	12	.61
20	3.0	2.3	1.6	4.3	1.6	2.9	2.5	16	1.2	.75	.94	.59
21	2.9	2.3	1.7	3.2	1.6	133	2.6	55	1.2	25	.72	.62
22	3.0	2.3	1.6	25	14	9.4	2.5	4.6	1.2	27	.70	.55
23	22	2.3	1.7	9.0	3.2	4.5	7.2	3.3	1.2	4.4	.72	.69
24	4.2	2.3	2.4	2.9	5.6	14	8.3	32	1.2	1.1	.70	.63
25	2.4	2.3	35	2.2	3.6	14	3.2	4.5	1.3	.95	.65	14
26	2.3	72	2.5	1.7	2.3	3.7	18	2.2	1.4	.96	.69	.89
27	2.3	5.4	1.9	1.7	1.6	3.1	73	1.9	1.3	.90	.67	.50
28	2.8	3.5	1.6	1.7	2.8	13	80	1.9	1.1	.86	.78	.53
29	2.6	2.8	1.6	1.7	1.9	90	31	1.8	21	1.6	.78	.52
30	2.5	2.5	1.6	1.6	---	7.2	25	1.6	1.9	.86	.69	.57
31	2.6	---	1.5	1.6	---	120	---	3.3	---	.77	.59	---
TOTAL	674.0	301.8	112.3	257.5	75.7	718.4	422.2	350.1	124.9	121.24	89.54	56.05
MEAN	21.7	10.1	3.62	8.31	2.61	23.2	14.1	11.3	4.16	3.91	2.89	1.87
MAX	180	72	35	76	14	133	80	66	39	27	38	14
MIN	2.3	2.0	1.5	1.4	1.4	1.4	2.5	1.6	1.1	.67	.59	.44
CFSM	3.93	1.83	.66	1.51	.47	4.20	2.55	2.05	.75	.71	.52	.34
IN.	4.54	2.03	.76	1.74	.51	4.84	2.84	2.36	.84	.82	.60	.38

CAL YR 1979 TOTAL 6078.96 MEAN 16.7 MAX 374 MIN .95 CFSM 3.03 IN 40.96
WTR YR 1980 TOTAL 3303.73 MEAN 9.03 MAX 180 MIN .44 CFSM 1.64 IN 22.26

01589440 JONES FALLS AT SORRENTO, MD

LOCATION.--Lat 39°23'30", long 76°39'42", Baltimore County, Hydrologic Unit 02060003, on right bank 0.3 mi (0.5 km) downstream from bridge on State Highway 25 (Falls Road), 0.4 mi (0.6 km) downstream from Slaughterhouse Branch and Sorrento, and 18 mi (29 km) upstream from mouth.

DRAINAGE AREA.--25.2 mi^2 (65.3 km^2).

PERIOD OF RECORD.--Annual maximum, water years 1958-66. April 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 240 ft (73 m), from topographic map. January 1958 to April 1966, nonrecording gage at site 450 ft (140 m) upstream at same datum.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 35.8 ft^3/s (1.014 m^3/s), 19.29 in/yr (490 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,800 ft^3/s (391 m^3/s) June 22, 1972, gage height, 18.11 ft (5.520 m), from floodmarks, from rating curve extended above 1,400 ft^3/s (39.6 m^3/s) on basis of slope-area measurement of peak flow; minimum, 1.8 ft^3/s (0.051 m^3/s) Sept. 7, 8, 1966, gage height, 1.16 ft (0.354 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft^3/s (17 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Oct. 1	Unknown	*1770	50.1	9.47	2.886	Oct. 10	0815	654	18.5	6.30	1.920

Minimum discharge, 6.2 ft^3/s (0.18 m^3/s) Sept. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	600	46	43	34	29	27	82	109	34	27	17	9.7
2	120	47	41	34	28	27	58	78	31	24	17	9.5
3	150	63	40	34	28	26	51	64	54	36	19	9.5
4	80	49	41	34	28	28	73	48	40	29	18	9.5
5	130	46	40	36	28	38	50	43	32	25	15	15
6	80	46	42	34	28	31	46	40	32	23	14	12
7	65	45	40	34	29	28	45	38	36	21	14	9.5
8	55	45	38	34	28	32	43	40	53	27	12	8.5
9	210	45	38	34	29	34	79	37	33	25	12	8.5
10	381	82	40	32	30	29	51	36	36	22	12	8.5
11	104	74	37	66	29	31	44	36	30	20	20	8.0
12	101	68	37	74	28	27	42	44	29	20	16	8.0
13	80	61	52	42	27	124	41	48	28	18	14	8.0
14	65	60	44	40	27	157	46	36	27	17	12	8.0
15	59	50	39	39	28	62	52	33	27	17	12	8.0
16	57	48	39	36	32	47	41	31	34	17	15	8.0
17	55	46	37	35	28	51	39	31	28	18	12	8.0
18	53	45	35	78	28	60	37	71	26	17	13	17
19	52	44	36	76	26	42	37	57	26	16	36	9.0
20	51	42	36	44	27	39	37	63	24	15	20	8.0
21	50	41	35	39	28	229	36	100	23	20	16	8.0
22	49	42	36	43	36	72	35	51	23	43	16	8.0
23	54	41	36	43	33	52	36	41	22	38	16	8.0
24	58	41	37	36	34	48	34	81	21	29	16	7.1
25	50	40	73	36	31	53	34	51	21	22	13	13
26	49	138	42	34	29	43	38	38	21	21	12	12
27	48	62	38	33	27	40	80	34	20	20	11	10
28	53	51	37	33	28	40	65	32	20	19	11	10
29	49	46	36	33	27	112	67	31	51	20	11	9.4
30	47	44	36	31	---	55	53	29	39	19	11	9.5
31	46	---	35	31	---	154	---	47	---	17	10	---
TOTAL	3101	1598	1236	1262	838	1838	1472	1518	921	702	463	285.2
MEAN	100	53.3	39.9	40.7	28.9	59.3	49.1	49.0	30.7	22.6	14.9	9.51
MAX	600	138	73	78	36	229	82	109	54	43	36	17
MIN	46	40	35	31	26	26	34	29	20	15	10	7.1
CFSM	3.97	2.12	1.58	1.62	1.15	2.35	1.95	1.94	1.22	.90	.59	.38
IN.	4.58	2.36	1.82	1.86	1.24	2.71	2.17	2.24	1.36	1.04	.68	.42

CAL YR 1979 TOTAL 24509.0 MEAN 67.1 MAX 1500 MIN 17 CFSM 2.66 IN 36.18
WTR YR 1980 TOTAL 15234.2 MEAN 41.6 MAX 600 MIN 7.1 CFSM 1.65 IN 22.49

01590500 BACON RIDGE BRANCH AT CHESTERFIELD, MD

LOCATION.--Lat 39°00'07", long 76°36'53", Anne Arundel County, Hydrologic Unit 02060004, on left bank 50 ft (15 m) downstream from highway bridge, 0.5 mi (0.8 km) east of Chesterfield, 1.4 mi (2.3 km) upstream from confluence with North River, and 6.8 mi (10.9 km) northwest of Annapolis.

DRAINAGE AREA.--6.92 mi^2 (17.92 km^2).

PERIOD OF RECORD.--October 1942 to September 1952. Annual maximum, water years 1965-74. October 1974 to current year. Monthly discharge only October and November 1942, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (4.6 m), from topographic map.

REMARKS.--Records good. Records include sewage from Crownsville State Hospital, which obtains its water supply from wells. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years (water years 1943-52, 1975-80), 9.96 ft^3/s (0.282 m^3/s), 19.55 in/yr (497 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft^3/s (59.5 m^3/s) Aug. 2, 1944, gage height, 5.49 ft (1.673 m), from rating curve extended above 140 ft^3/s (3.96 m^3/s) on basis of velocity-area studies; minimum discharge, 2.2 ft^3/s (0.062 m^3/s) part or all of each day Oct. 1-8, 1977, Sept. 30, 1978, Sept. 1-5, 1979; minimum gage height, 1.72 ft (0.524 m) Aug. 30, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 170 ft^3/s (4.81 m^3/s) Oct. 5; gage height, 3.44 ft (1.049 m), no peak above base of 185 ft^3/s (5.2 m^3/s); minimum, 2.2 ft^3/s (0.062 m^3/s) part of each day Sept. 1-5, gage height 1.74 ft (0.530 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	9.3	9.8	7.8	6.8	6.8	18	26	7.2	4.8	4.5	2.6
2	24	9.6	9.6	7.6	6.2	8.1	16	18	6.6	4.1	5.0	2.6
3	18	18	9.2	7.7	6.4	8.8	14	19	9.3	21	3.7	2.4
4	13	14	9.5	7.8	7.2	9.0	17	14	11	9.1	4.5	2.4
5	56	11	9.6	8.9	7.1	15	12	12	6.6	5.6	4.7	8.3
6	62	10	9.8	8.3	7.4	13	11	11	6.6	4.8	8.7	4.4
7	21	10	11	9.0	7.9	9.7	10	11	7.7	4.1	4.0	5.3
8	13	9.7	9.0	9.3	7.9	9.8	10	12	6.1	7.9	3.5	3.3
9	15	9.8	8.5	8.6	8.1	9.5	20	11	5.2	6.1	3.3	3.0
10	54	11	8.8	7.7	8.8	8.8	15	9.6	6.1	5.6	3.2	3.5
11	43	13	8.5	15	8.2	8.5	12	9.6	5.6	4.8	4.3	3.0
12	21	18	8.5	17	8.2	7.7	11	9.7	5.2	4.1	3.5	2.8
13	19	12	13	9.7	7.4	15	11	11	5.6	3.7	3.3	2.8
14	17	14	10	9.7	7.8	31	14	10	5.2	3.7	3.1	2.9
15	13	11	8.7	9.0	8.6	12	11	8.2	6.4	3.4	4.0	2.9
16	12	10	8.8	8.2	12	11	9.7	7.8	12	3.4	9.1	2.8
17	12	9.6	8.1	8.2	9.1	11	9.5	8.0	7.7	4.9	3.7	2.8
18	11	9.3	7.5	15	7.2	12	9.3	21	5.6	5.8	4.1	3.2
19	11	9.3	7.9	29	7.7	9.9	9.3	15	5.6	3.8	4.3	3.0
20	10	9.3	8.3	12	8.5	9.8	9.0	16	5.2	3.5	4.0	2.9
21	10	9.3	8.0	11	9.6	21	8.8	22	4.8	3.3	3.7	3.0
22	9.9	9.3	8.5	12	12	14	9.5	13	4.8	8.9	3.6	2.9
23	10	9.3	8.8	15	11	11	8.8	10	4.4	22	3.6	2.8
24	15	9.3	8.8	9.6	11	12	9.2	13	4.4	6.7	3.9	2.6
25	11	9.3	16	9.9	11	15	10	13	4.8	4.6	3.2	11
26	10	28	10	9.2	9.7	11	13	9.1	4.4	4.1	2.9	6.0
27	9.8	21	8.6	8.7	8.2	10	20	7.8	4.8	3.8	2.8	3.4
28	9.8	12	8.2	9.1	8.2	12	38	7.5	4.1	3.5	2.7	3.1
29	9.9	11	8.2	8.8	8.0	30	27	7.2	5.2	3.8	2.7	3.1
30	9.5	10	8.0	7.5	---	20	20	7.0	7.7	3.5	2.7	3.3
31	9.3	---	7.8	8.2	---	28	---	7.3	---	3.3	2.6	---
TOTAL	600.2	356.4	285.0	324.5	247.2	410.4	413.1	376.8	185.9	181.7	122.9	108.1
MEAN	19.4	11.9	9.19	10.5	8.52	13.2	13.8	12.2	6.20	5.86	3.96	3.60
MAX	62	28	16	29	12	31	38	26	12	22	9.1	11
MIN	9.3	9.3	7.5	7.5	6.2	6.8	8.8	7.0	4.1	3.3	2.6	2.4
CFSM	2.80	1.72	1.33	1.52	1.23	1.91	1.99	1.76	.90	.85	.57	.52
IN.	3.23	1.92	1.53	1.74	1.33	2.21	2.22	2.03	1.00	.98	.66	.58

CAL YR 1979 TOTAL 5170.5 MEAN 14.2 MAX 259 MIN 4.0 CFSM 2.05 IN 27.79
WTR YR 1980 TOTAL 3612.2 MEAN 9.87 MAX 62 MIN 2.4 CFSM 1.43 IN 19.42

01591000 PATUXENT RIVER NEAR UNITY, MD

LOCATION.--Lat 39°14'18", long 77°03'23", Montgomery County, Hydrologic Unit 02060006, on right bank at downstream side of bridge on State Highway 97, 0.6 mi (1 km) upstream from Cattail Creek, 0.8 mi (1.3 km) upstream from Triadelphia Reservoir, 1.1 mi (1.8 km) northeast of Unity, and 97 mi (155 km) upstream from mouth.

DRAINAGE AREA.--34.8 mi² (90.1 km²).

PERIOD OF RECORD.--July 1944 to current year.

REVISED RECORDS.--WSP 1111: 1947. WSP 1432: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 364.76 ft (111.179 m) Washington Suburban Sanitary Commission datum. Prior to Aug. 14, 1946, non-recording gage at same site and datum.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years, 40.2 ft³/s (1.138 m³/s), 15.69 in/yr (399 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,800 ft³/s (595 m³/s) Sept. 11, 1971, gage height, 18.60 ft (5.669 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurement at gage height 13.00 ft (3.962 m); minimum, 0.20 ft³/s (0.006 m³/s) Sept. 10, 11, 12, 1966, gage height, 1.66 ft (0.506 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 770 ft³/s (21 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1200	*6190	175	11.72	3.572	May 24	2000	885	25.1	5.72	1.743

Minimum discharge, 6.2 ft³/s (0.18 m³/s) Sept. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	60	47	36	36	29	151	140	73	31	17	9.4
2	160	64	46	35	35	28	106	97	66	29	18	8.7
3	198	79	44	35	33	28	94	114	94	47	20	8.0
4	118	63	45	35	33	28	98	87	72	35	19	7.7
5	147	59	45	37	33	45	84	80	57	30	16	9.5
6	107	56	45	35	33	42	76	74	66	28	15	9.0
7	91	55	44	35	33	36	70	69	76	25	14	8.5
8	82	53	42	35	33	39	68	69	57	35	13	8.0
9	105	53	41	34	33	38	117	65	50	35	13	7.4
10	405	72	41	33	35	33	101	61	55	45	13	8.3
11	188	79	41	46	33	33	80	61	49	29	30	7.2
12	162	86	40	74	32	29	75	60	47	26	17	6.8
13	140	72	54	44	31	56	72	68	45	24	15	6.8
14	117	69	51	45	31	117	79	58	44	23	13	6.9
15	107	61	43	49	31	84	104	53	43	22	14	7.4
16	101	59	42	42	35	73	76	51	53	22	16	7.1
17	95	57	40	40	32	73	68	49	44	21	13	7.6
18	90	54	37	76	30	83	65	87	41	20	14	11
19	85	52	38	114	32	62	62	71	39	19	18	8.5
20	82	51	38	66	30	55	60	96	37	18	16	8.2
21	80	50	38	56	32	228	58	218	35	17	15	8.5
22	77	48	39	55	40	121	55	102	34	33	14	8.1
23	84	48	39	58	38	90	55	80	33	34	14	7.5
24	95	48	40	47	40	79	53	242	33	23	13	6.6
25	76	47	67	46	37	76	54	125	32	20	12	9.3
26	71	83	47	44	34	64	58	86	32	19	11	10
27	69	68	42	41	31	59	102	74	31	18	11	8.1
28	70	55	39	42	30	57	111	67	30	18	10	7.6
29	67	51	38	40	30	157	127	63	54	20	10	7.6
30	63	48	38	37	---	92	90	59	41	18	9.7	7.6
31	61	---	37	37	---	161	---	112	---	17	9.1	---
TOTAL	4653	1800	1328	1449	966	2195	2469	2738	1463	801	452.8	242.9
MEAN	150	60.0	42.8	46.7	33.3	70.8	82.3	88.3	48.8	25.8	14.6	8.10
MAX	1260	86	67	114	40	228	151	242	94	47	30	11
MIN	61	47	37	33	30	28	53	49	30	17	9.1	6.6
CFSM	4.31	1.72	1.23	1.34	.96	2.03	2.37	2.54	1.40	.74	.42	.23
IN.	4.97	1.92	1.42	1.55	1.03	2.35	2.64	2.93	1.56	.86	.48	.26

CAL YR 1979 TOTAL 29631.0 MEAN 81.2 MAX 1260 MIN 20 CFSM 2.33 IN 31.67
WTR YR 1980 TOTAL 20557.7 MEAN 56.2 MAX 1260 MIN 6.6 CFSM 1.62 IN 21.97

01591350 CATTAIL CREEK NEAR COOKSVILLE, MD

LOCATION.--Lat 39°18'50", long 77°03'15", Howard County, Hydrologic Unit 02060006, on left bank at upstream side of bridge on Bushy Park Road, 0.1 mi (0.2 km) west of intersection of Carrs Mill Road, 2.3 mi (3.7 km) west of Cooksville, and 6.8 mi (10.9 km) upstream from mouth.
DRAINAGE AREA.--8.37 mi² (21.68 km²).
PERIOD OF RECORD.--April 1977 to current year.
GAGE.--Water-stage recorder. Altitude of gage is 475 ft (145 m), from topographic map.
REMARKS.--Records good. Several observations of water temperature were made during the period April 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,460 ft³/s (69.7 m³/s) Sept. 6, 1979, gage height, 10.14 ft (3.091 m); minimum, 1.2 ft³/s (0.034 m³/s) Sept. 21, 22, 1977.
EXTREMES FOR PERIOD APRIL 1977 TO SEPTEMBER 1980.--Peak discharges above base of 400 ft³/s (11 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 6, 1977	1815	470	13.3	7.89	2.405	Aug. 17, 1977	1615	423	12.0	7.62	2.323
Dec. 18, 1977	1100	636	18.0	8.78	2.676	Jan. 26, 1978	0600	*670	19.0	8.95	2.728
Jan. 9, 1978	0330	423	12.0	7.62	2.323	Mar. 26, 1978	1445	486	13.8	7.98	2.432
Jan. 25, 1978	1530	463	13.1	7.85	2.393						
Jan. 21, 1979	0445	492	13.9	8.35	2.545	June 1, 1979	0445	513	14.5	8.11	2.472
Jan. 24, 1979	1030	603	17.1	8.35	2.545	Sept. 6, 1979	0030	*2460	69.7	10.14	3.091
Feb. 24, 1979	2400	681	19.3	8.52	2.597	Sept. 21, 1979	2315	630	17.8	8.41	2.563
Feb. 25, 1979	2230	705	20.0	8.57	2.612						
Oct. 1, 1979	0930	*1280	36.2	9.33	2.844						

April to September 1977: Minimum discharge during period, 1.3 ft³/s (0.037 m³/s) Sept. 11, 12, 13, 14, 15, 18, 19, 29, 30, 1977.

Water year 1978: Minimum discharge, 1.3 ft³/s (0.037 m³/s) Oct. 1, 1977.

Water year 1979: Minimum discharge, 3.9 ft³/s (0.11 m³/s) all or part of each day Oct. 11-16, 1978.

Water year 1980: Minimum discharge, 1.7 ft³/s (0.048 m³/s) Sept. 24, 25, 1980.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR APRIL 1977 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	5.9	4.3	3.2	2.0	2.1
2							---	5.7	4.7	3.0	2.1	2.1
3							---	5.8	4.0	2.8	2.2	2.1
4							---	6.1	3.8	2.8	2.2	2.0
5							---	7.4	4.1	2.8	2.9	1.8
6							---	51	5.1	2.6	3.1	1.7
7							---	11	4.4	2.7	2.3	1.7
8							---	7.5	4.0	2.6	6.9	1.6
9							---	6.5	6.9	2.7	3.5	1.6
10							---	6.1	5.0	2.6	3.8	1.8
11							---	5.9	4.4	2.6	3.4	1.5
12							---	5.6	4.0	2.7	4.0	1.4
13							---	5.4	3.9	2.6	2.7	1.4
14							---	5.3	3.9	2.4	2.8	1.4
15							---	5.0	4.1	2.2	2.8	1.4
16							---	4.9	3.8	2.0	2.5	1.6
17							---	4.8	3.8	15	43	1.9
18							---	5.0	4.4	4.7	4.5	1.5
19							---	5.3	3.8	2.9	3.3	1.6
20							6.5	4.8	5.4	3.2	3.0	2.4
21							6.4	4.6	4.1	2.7	2.8	1.6
22							6.4	4.5	3.6	2.5	3.0	1.6
23							6.2	4.4	3.4	2.3	2.6	1.6
24							6.8	4.4	3.4	2.2	2.8	1.6
25							7.1	4.8	3.4	2.7	2.7	1.7
26							6.8	4.6	3.4	2.7	2.5	1.8
27							6.3	4.3	3.2	2.2	2.4	1.8
28							6.4	4.1	6.3	2.0	2.3	1.9
29							6.6	4.0	4.4	2.0	2.1	1.5
30							---	4.1	3.3	2.5	2.2	1.5
31							---	4.1	---	2.1	2.3	---
TOTAL							---	212.9	126.3	94.0	130.7	51.2
MEAN							---	6.87	4.21	3.03	4.22	1.71
MAX							---	51	6.9	15	43	2.4
MIN							---	4.0	3.2	2.0	2.0	1.4
CFSM							---	.82	.50	.36	.50	.20
IN.							---	.95	.56	.42	.58	.23

01591350 CATTAIL CREEK NEAR COOKSVILLE, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.3	30	7.2	11	8.8	13	8.0	10	7.8	29	29
2	1.9	3.3	8.5	6.9	11	8.4	12	7.7	9.8	13	9.8	7.7
3	1.6	3.9	7.2	6.5	10	8.7	13	7.4	10	142	8.3	6.7
4	1.4	6.5	6.5	6.2	10	8.2	13	11	11	18	8.3	6.3
5	1.4	4.3	7.3	6.0	9.8	7.7	12	12	9.8	12	54	5.9
6	1.6	12	7.0	6.2	9.7	7.7	11	9.6	9.4	11	11	5.7
7	1.6	37	5.8	6.4	12	7.6	12	8.7	9.4	9.4	9.0	5.6
8	1.5	21	5.3	15	9.8	7.7	11	9.5	10	9.1	8.4	5.6
9	5.2	7.4	5.6	77	9.4	7.8	10	12	9.8	8.7	8.1	5.4
10	2.2	7.7	5.0	15	9.0	10	10	9.8	8.7	8.4	13	5.0
11	1.9	7.4	4.8	7.6	9.0	49	10	8.7	8.4	8.1	8.1	5.2
12	1.6	5.7	4.8	7.4	8.9	40	11	8.2	8.4	7.8	8.0	5.3
13	1.6	5.5	4.9	8.9	8.9	47	10	37	9.4	7.4	8.0	7.4
14	4.1	5.0	8.9	19	9.2	80	9.7	32	8.4	7.8	7.9	5.9
15	7.4	4.8	8.5	9.5	8.8	26	9.4	61	8.1	8.7	7.4	5.8
16	4.5	4.7	6.2	9.1	8.7	17	9.4	58	7.8	8.1	7.1	5.4
17	7.7	5.4	5.7	20	9.0	17	9.4	26	10	8.1	6.7	5.2
18	3.7	5.1	231	36	9.0	16	9.5	20	9.1	7.4	6.4	5.0
19	3.3	4.6	37	11	8.9	21	13	17	7.8	7.1	6.2	5.3
20	3.1	4.5	23	11	8.7	14	14	15	7.5	6.8	6.0	5.0
21	2.9	4.6	49	9.1	8.4	14	10	14	51	6.6	5.8	5.0
22	2.7	4.9	14	8.5	8.2	13	10	13	14	6.5	5.7	5.0
23	2.5	14	11	8.2	8.0	12	9.6	13	9.1	6.3	5.6	4.9
24	2.5	6.9	11	8.0	7.9	12	9.3	13	8.4	6.1	5.5	4.9
25	2.5	6.7	11	172	11	12	9.0	13	8.1	8.8	5.5	4.9
26	9.8	12	8.8	367	11	177	8.9	11	8.1	7.2	5.8	4.8
27	12	6.3	7.9	24	10	40	8.6	11	14	7.7	6.7	4.8
28	4.8	5.8	7.2	16	9.1	18	8.3	11	13	7.9	9.7	4.8
29	3.9	7.5	6.9	14	---	16	8.1	11	20	6.3	6.2	4.8
30	3.7	12	6.8	13	---	14	8.0	11	10	6.3	6.0	4.8
31	3.3	---	7.2	12	---	13	---	11	---	39	10	---
TOTAL	109.5	239.8	563.8	943.7	264.4	750.6	312.2	510.6	338.5	425.4	303.2	187.1
MEAN	3.53	7.99	18.2	30.4	9.44	24.2	10.4	16.5	11.3	13.7	9.78	6.24
MAX	12	37	231	367	12	177	14	61	51	142	54	29
MIN	1.4	3.3	4.8	6.0	7.9	7.6	8.0	7.4	7.5	6.1	5.5	4.8
CFSM	.42	.96	2.17	3.63	1.13	2.89	1.24	1.97	1.35	1.64	1.17	.75
IN.	.49	1.07	2.51	4.19	1.17	3.34	1.39	2.27	1.50	1.89	1.35	.83

WTR YR 1978 TOTAL 4948.8 MEAN 13.6 MAX 367 MIN 1.4 CFSM 1.63 IN 21.99

01591350 CATTAIL CREEK NEAR COOKSVILLE, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	5.0	7.1	17	12	37	13	11	81	9.1	6.3	5.6
2	5.0	4.8	6.3	92	11	30	13	11	15	8.7	9.0	6.2
3	4.8	4.8	6.4	16	10	22	16	10	31	7.5	7.7	5.6
4	5.0	4.9	16	13	10	21	19	10	28	8.5	6.2	5.3
5	5.6	5.0	18	11	10	45	17	11	16	8.2	5.5	255
6	8.7	4.8	8.3	11	9.8	37	14	10	13	7.2	5.1	285
7	5.0	4.8	7.2	19	10	21	13	10	12	6.9	4.8	17
8	4.5	4.8	7.6	48	9.9	19	13	9.8	11	6.6	4.8	13
9	4.5	4.8	49	14	10	17	25	9.7	10	6.5	6.9	11
10	4.4	4.5	14	12	9.8	17	19	9.4	10	6.6	7.4	10
11	3.9	4.6	9.4	11	9.4	26	15	9.2	10	6.6	5.8	9.9
12	3.9	4.7	8.5	11	9.6	17	14	9.1	10	6.3	25	9.5
13	3.9	4.8	7.9	12	9.6	16	14	12	9.7	6.1	8.4	9.2
14	3.9	4.8	7.5	24	9.6	15	16	13	9.3	7.3	5.9	10
15	3.9	4.9	7.1	12	9.6	14	14	10	9.1	7.1	5.3	9.3
16	4.2	5.7	6.9	11	9.6	14	13	10	9.0	6.3	5.0	8.5
17	4.6	7.3	6.8	11	9.4	14	13	9.3	12	6.0	4.8	8.3
18	4.5	14	6.8	9.9	9.4	14	12	8.9	10	5.8	4.8	8.2
19	4.5	6.0	6.8	12	10	13	12	11	9.1	5.9	5.0	8.1
20	4.4	5.4	6.8	50	11	13	12	11	8.7	6.5	5.0	7.7
21	4.2	5.1	9.0	222	12	13	11	9.8	8.5	6.7	12	84
22	4.2	5.0	7.4	22	15	13	11	9.6	8.9	6.0	7.4	96
23	4.2	5.0	6.8	17	17	12	11	13	8.4	5.8	6.5	25
24	4.2	5.3	25	212	227	37	11	38	8.1	5.5	6.8	14
25	4.3	4.9	38	23	387	21	11	18	7.9	5.5	9.1	13
26	4.6	4.8	11	16	267	15	11	14	7.7	5.6	8.4	12
27	5.1	6.5	9.1	15	63	14	13	11	8.0	5.3	8.4	11
28	4.8	8.1	8.0	14	55	13	13	11	8.5	6.8	7.8	11
29	4.8	11	7.5	14	---	13	12	10	8.1	11	6.8	11
30	4.8	12	7.3	13	---	13	11	9.5	8.3	18	6.2	11
31	5.0	---	9.0	13	---	13	---	9.4	---	7.0	5.9	---
TOTAL	144.4	178.1	352.5	997.9	1242.7	599	412	358.7	406.3	222.9	224.0	990.4
MEAN	4.66	5.94	11.4	32.2	44.4	19.3	13.7	11.6	13.5	7.19	7.23	33.0
MAX	8.7	14	49	222	387	45	25	38	81	18	25	285
MIN	3.9	4.5	6.3	9.9	9.4	12	11	8.9	7.7	5.3	4.8	5.3
CFSM	.56	.71	1.36	3.85	5.31	2.31	1.64	1.39	1.61	.86	.86	3.94
IN.	.64	.79	1.57	4.43	5.52	2.66	1.83	1.59	1.81	.99	1.00	4.40

CAL YR 1978 TOTAL 4710.7 MEAN 12.9 MAX 367 MIN 3.9 CFSM 1.54 IN 20.93
WTR YR 1979 TOTAL 6128.9 MEAN 16.8 MAX 387 MIN 3.9 CFSM 2.01 IN 27.24

01591350 CATTAIL CREEK NEAR COOKSVILLE, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	212	13	11	9.2	8.4	7.5	23	30	12	7.5	5.1	2.4
2	21	14	11	9.1	8.4	7.5	16	15	11	7.1	5.1	2.4
3	32	16	11	9.1	8.1	7.5	14	18	14	17	4.8	2.4
4	16	13	11	9.1	7.8	7.5	16	13	12	9.1	4.9	2.4
5	40	13	11	9.4	7.8	11	13	12	10	8.1	4.3	2.7
6	17	13	11	9.2	7.9	9.5	12	12	13	7.8	4.2	2.6
7	15	12	11	9.1	8.0	8.6	12	11	13	7.1	3.9	2.6
8	14	12	10	9.1	7.9	9.2	12	11	11	8.4	3.6	2.3
9	24	12	10	9.1	8.1	8.9	26	11	9.7	8.1	3.4	2.3
10	145	15	10	8.6	8.2	8.2	17	11	11	8.1	3.4	2.4
11	34	21	10	15	8.1	8.6	13	11	9.7	7.1	5.3	2.1
12	32	17	10	16	7.9	7.5	13	11	9.2	6.8	4.2	2.1
13	23	15	14	10	7.8	23	13	12	9.1	6.2	3.6	2.1
14	19	14	12	11	7.6	36	18	10	8.9	5.9	3.4	2.3
15	18	13	11	11	7.8	15	20	9.8	9.8	5.6	3.6	2.3
16	17	13	11	9.9	8.1	12	13	9.5	11	5.6	3.9	2.3
17	17	12	10	9.5	7.8	15	12	9.4	8.9	5.6	3.4	2.3
18	16	12	9.6	28	7.6	15	12	18	8.4	5.3	3.6	2.8
19	16	12	9.8	18	7.4	11	12	14	8.2	5.0	4.5	2.4
20	15	12	9.8	12	7.6	11	11	20	7.8	4.8	3.9	2.3
21	15	12	9.9	11	8.0	57	11	41	7.5	4.8	3.9	2.3
22	15	12	10	12	9.4	16	11	15	7.4	23	3.6	2.3
23	21	12	10	12	9.2	13	11	13	7.3	9.1	3.6	2.1
24	17	12	10	9.9	9.6	12	11	15	7.2	6.9	3.4	1.9
25	15	12	17	10	9.0	12	11	13	7.2	6.0	3.1	2.8
26	14	25	11	9.7	8.4	11	12	12	7.3	6.0	2.8	2.6
27	14	14	10	9.4	7.8	10	22	11	7.1	5.4	2.7	2.4
28	14	12	9.8	9.4	7.9	11	20	11	6.8	5.2	2.7	2.4
29	14	12	9.7	9.4	7.9	38	18	11	10	5.4	2.7	2.4
30	13	11	9.4	8.6	---	15	14	10	8.7	4.6	2.6	2.4
31	13	---	9.4	8.7	---	45	---	21	---	4.9	2.6	---
TOTAL	908	408	330.4	341.5	235.5	479.5	439	441.7	284.2	227.5	115.8	71.1
MEAN	29.3	13.6	10.7	11.0	8.12	15.5	14.6	14.2	9.47	7.34	3.74	2.37
MAX	212	25	17	28	9.6	57	26	41	14	23	5.3	2.8
MIN	13	11	9.4	8.6	7.4	7.5	11	9.4	6.8	4.6	2.6	1.9
CFSM	3.50	1.63	1.28	1.31	.97	1.85	1.74	1.70	1.13	.88	.45	.28
IN.	4.04	1.81	1.47	1.52	1.05	2.13	1.95	1.96	1.26	1.01	.51	.32

CAL YR 1979 TOTAL 7100.3 MEAN 19.5 MAX 387 MIN 4.8 CFSM 2.33 IN 31.55
WTR YR 1980 TOTAL 4282.2 MEAN 11.7 MAX 212 MIN 1.9 CFSM 1.40 IN 19.03

01591400 CATTAIL CREEK AT ROXBURY MILLS ROAD AT ROXBURY MILLS, MD

LOCATION.--Lat 39°15'27", long 77°03'13", Howard County, Hydrologic Unit 02060006, on right bank at upstream side of bridge on Roxbury Mill Road, 1.3 mi (2.1 km) upstream from mouth.

DRAINAGE AREA.--22.9 mi² (59.3 km²).

PERIOD OF RECORD.--June 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 400 ft (122 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the period June 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s (113 m³/s) Sept. 6, 1979, gage height, 11.69 ft (3.563 m), from rating curve extended above 1,800 ft³/s (51.0 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 5.0 ft³/s (0.14 m³/s) part or all of each day Sept. 11-17, 24, 25, 1980.

EXTREMES FOR PERIOD JUNE 1978 TO SEPTEMBER 1980.--Peak discharges above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 21, 1978	2045	788	22.3	6.97	2.124	July 3, 1978	1445	783	22.2	6.95	2.118
Jan. 2, 1979	1300	534	15.1	5.75	1.753	Feb. 26, 1979	0230	1780	50.4	9.10	2.774
Jan. 21, 1979	0545	885	25.1	7.31	2.228	June 1, 1979	0645	654	18.5	6.37	1.942
Jan. 21, 1979	1645	790	22.4	6.98	2.128	Sept. 6, 1979	Unknown	*4000	113	11.69	3.563
Jan. 24, 1979	1515	1130	32.0	7.99	2.435	Sept. 22, 1979	0215	927	26.3	7.44	2.268
Feb. 25, 1979	0300	1320	37.4	8.37	2.551						
Oct. 1, 1979	1245	*1910	54.1	9.28	2.829	Oct. 10, 1979	0745	580	16.4	5.97	1.820

June to September 1978: Minimum discharge during period, 12 ft³/s (0.34 m³/s) Sept. 29, 30, 1978, gage height, 1.86 ft (0.567 m).

Water year 1979: Minimum discharge, 9.7 ft³/s (0.27 m³/s) Oct. 25, 1978, gage height, 1.82 ft (0.555 m).

Water year 1980: Minimum discharge, 5.0 ft³/s (0.14 m³/s) Sept. 11, 12, 13, 14, 15, 16, 17, 24, 25, 1980, gage height, 1.75 ft (0.533 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR JUNE 1978 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	21	114	48
2									---	35	27	20
3									---	311	22	17
4									---	56	22	16
5									---	34	107	16
6									---	28	28	15
7									22	25	26	14
8									25	23	25	14
9									24	23	21	14
10									21	22	31	13
11									20	20	21	13
12									20	19	21	14
13									22	19	20	19
14									19	19	20	15
15									19	21	19	15
16									18	20	18	15
17									25	20	18	15
18									22	19	16	15
19									20	18	16	15
20									19	18	16	14
21									135	18	15	14
22									49	17	14	14
23									24	16	14	14
24									21	16	14	14
25									20	20	14	14
26									20	18	14	13
27									26	18	15	13
28									32	23	25	13
29									31	17	16	12
30									32	16	16	12
31									---	28	36	---
TOTAL	---	---	---	---	---	---	---	---	---	978	801	470
MEAN	---	---	---	---	---	---	---	---	---	31.5	25.8	15.7
MAX	---	---	---	---	---	---	---	---	---	311	114	48
MIN	---	---	---	---	---	---	---	---	---	16	14	12
CFSM	---	---	---	---	---	---	---	---	---	1.38	1.13	.69
IN.	---	---	---	---	---	---	---	---	---	1.59	1.30	.76

01591400 CATTAIL CREEK AT ROXBURY MILLS ROAD AT ROXBURY MILLS, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	18	46	29	110	32	26	169	23	20	17
2	12	11	16	248	29	84	33	25	39	23	31	19
3	12	11	15	52	28	60	39	25	88	19	24	18
4	12	11	38	42	27	54	47	27	79	20	18	17
5	13	11	47	28	25	121	45	27	41	21	16	360
6	22	11	22	28	25	108	34	25	34	18	16	970
7	13	11	19	49	25	58	31	24	31	18	15	48
8	12	11	19	138	25	48	31	24	29	17	14	33
9	11	11	122	42	24	43	60	23	27	16	20	27
10	11	11	45	36	24	42	55	23	27	17	27	25
11	10	11	26	28	23	68	38	22	27	16	19	24
12	10	11	23	28	23	43	35	22	25	16	74	23
13	10	11	21	31	24	39	34	38	23	16	30	22
14	10	11	20	68	24	39	41	35	23	16	20	25
15	10	11	19	35	24	35	35	26	22	18	17	24
16	11	13	18	28	24	33	33	27	22	16	16	21
17	11	16	18	27	23	33	31	23	29	16	15	20
18	11	31	18	26	23	33	30	22	27	15	15	19
19	11	14	18	28	24	32	29	30	23	15	16	20
20	11	12	18	91	26	31	29	27	21	16	15	18
21	10	12	24	584	28	30	28	24	20	18	39	124
22	10	11	19	71	36	30	28	24	22	16	22	276
23	10	11	18	46	48	30	28	27	20	16	18	71
24	10	13	38	469	377	96	28	101	20	15	21	39
25	10	11	113	76	836	59	28	51	19	15	29	34
26	10	11	30	45	750	39	29	39	18	15	25	32
27	12	14	24	40	186	35	38	30	18	15	23	30
28	11	18	21	39	118	33	31	28	18	16	24	31
29	11	19	20	37	---	33	28	27	19	17	20	31
30	11	35	20	35	---	32	27	25	20	42	19	30
31	11	---	24	32	---	31	---	24	---	18	18	---
TOTAL	351	406	911	2573	2878	1562	1035	921	1000	555	696	2448
MEAN	11.3	13.5	29.4	83.0	103	50.4	34.5	29.7	33.3	17.9	22.5	81.6
MAX	22	35	122	584	836	121	60	101	169	42	74	970
MIN	10	11	15	26	23	30	27	22	18	15	14	17
CFSM	.49	.59	1.28	3.62	4.50	2.20	1.51	1.30	1.45	.78	.98	3.56
IN.	.57	.66	1.48	4.18	4.67	2.54	1.68	1.50	1.62	.90	1.13	3.98

WTR YR 1979 TOTAL 15336 MEAN 42.0 MAX 970 MIN 10 CFSM 1.83 IN 24.91

01591400 CATTAIL CREEK AT ROXBURY MILLS ROAD AT ROXBURY MILLS, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	570	36	30	25	23	21	77	83	40	20	13	7.0
2	66	37	30	25	23	21	48	46	36	20	14	6.6
3	83	45	29	25	23	21	43	59	40	40	14	6.2
4	48	37	30	25	23	21	50	41	37	25	15	6.0
5	90	35	30	26	24	30	40	37	30	21	13	7.3
6	52	35	30	26	22	27	36	34	32	20	12	7.1
7	43	34	29	25	21	24	35	33	41	18	11	7.0
8	39	33	28	25	20	26	34	34	31	23	12	6.2
9	59	34	27	25	20	26	67	32	27	23	11	5.7
10	311	46	28	24	22	23	52	31	30	21	11	5.9
11	95	55	28	35	21	22	40	31	27	19	15	5.6
12	80	54	28	51	21	20	38	32	26	18	13	5.3
13	67	44	38	30	20	52	37	36	25	17	11	5.1
14	53	42	34	31	20	106	45	31	25	16	11	5.0
15	49	37	29	32	20	47	62	28	25	16	11	5.3
16	48	36	29	28	23	35	40	28	31	16	12	5.1
17	46	34	27	27	21	41	36	27	26	15	10	5.1
18	45	34	25	59	20	45	34	53	25	15	11	8.2
19	43	33	26	67	20	32	34	39	24	14	13	6.3
20	42	32	27	37	20	30	32	54	23	14	12	6.2
21	41	32	27	32	21	139	31	123	22	14	11	6.2
22	40	32	27	33	26	51	31	49	21	36	11	6.2
23	47	32	27	35	25	39	31	38	21	27	11	5.7
24	52	32	28	28	27	36	31	42	21	18	11	5.1
25	41	31	50	28	25	36	31	39	21	16	9.6	6.7
26	39	64	32	27	23	32	33	33	20	15	8.8	6.9
27	37	42	29	26	21	30	59	30	20	14	8.3	5.7
28	39	35	27	27	21	31	55	29	19	14	7.9	5.6
29	38	33	27	26	21	100	59	29	32	15	7.8	5.6
30	36	31	26	24	---	46	41	28	26	14	7.4	5.6
31	35	---	26	23	---	114	---	61	---	13	7.2	---
TOTAL	2374	1137	908	957	637	1324	1282	1290	824	587	346.0	181.5
MEAN	76.6	37.9	29.3	30.9	22.0	42.7	42.7	41.6	27.5	18.9	11.2	6.05
MAX	570	64	50	67	27	139	77	123	41	40	15	8.2
MIN	35	31	25	23	20	20	31	27	19	13	7.2	5.0
CFSM	3.35	1.66	1.28	1.35	.96	1.87	1.87	1.82	1.20	.83	.49	.26
IN.	3.86	1.85	1.47	1.55	1.03	2.15	2.08	2.10	1.34	.95	.56	.29

CAL YR 1979 TOTAL 18087.0 MEAN 49.6 MAX 970 MIN 14 CFSM 2.17 IN 29.38
WTR YR 1980 TOTAL 11847.5 MEAN 32.4 MAX 570 MIN 5.0 CFSM 1.42 IN 19.24

01591700 HAWLINGS RIVER NEAR SANDY SPRING, MD

LOCATION.--Lat 39°10'29", long 77°01'22", Montgomery County, Hydrologic Unit 02060006, on right bank at downstream side of bridge on State Highway 650, 1.0 mi (1.6 km) upstream from mouth, and 1.7 mi (2.7 km) north of Sandy Spring.

DRAINAGE AREA.--27.0 mi^2 (69.9 km^2).

PERIOD OF RECORD.--June 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 320 ft (98 m), from topographic map.

REMARKS.--Records good except those for periods of doubtful or no gage-height record, July 31 to Sept. 30, 1979, Oct. 1-9, 1979, Apr. 24 to May 29, 1980, and July 15 to Aug. 13, 1980, which are fair. Several observations of water temperature were made during the period June 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,300 ft^3/s (122 m^3/s) Sept. 6, 1979, gage height, 8.80 ft (2.682 m), from rating curve extended above 1,200 ft^3/s (34.0 m^3/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 4.2 ft^3/s (0.12 m^3/s), part of each day Sept. 24-25, 1980.

EXTREMES FOR PERIOD JUNE 1978 TO SEPTEMBER 1980.--Peak discharges above base of 700 ft^3/s (19 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Jan. 21, 1979	Unknown	1460	41.3	6.08	1.853	June 3, 1979	1500	885	25.1	4.99	1.521
Jan. 24, 1979	1530	910	25.8	5.06	1.542	Sept. 6, 1979	Unknown	*4300	122	8.8	2.68
Feb. 25, 1979	0200	1100	31.2	5.57	1.698	Sept. 22, 1979	Unknown	1360	38.5	6.21	1.893
Feb. 26, 1979	0145	1150	32.6	5.68	1.731						
Oct. 1, 1979	Unknown	*1650	46.7	6.69	2.039	Mar. 13, 1980	2115	759	21.5	4.63	1.411
Oct. 10, 1979	0915	797	22.6	4.74	1.445						

June to September 1978: Minimum discharge, 7.6 ft^3/s (0.22 m^3/s) Sept. 6, 7, 9, 10, 11, 12, 1978.

Water year 1979: Minimum discharge, 8.2 ft^3/s (0.23 m^3/s) Oct. 9, 1978.

Water year 1980: Minimum discharge, 4.2 ft^3/s (0.12 m^3/s) Sept. 24, 25, 1980.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR JUNE 1978 TO SEPTEMBER 1978

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	18	96	15
2									---	40	27	13
3									---	257	21	11
4									---	80	21	11
5									---	37	52	10
6									---	28	23	9.4
7									---	24	69	9.4
8									31	22	31	11
9									29	21	20	10
10									23	20	42	8.8
11									21	20	21	8.8
12									21	17	24	12
13									23	16	23	38
14									20	17	23	12
15									20	18	20	11
16									19	32	18	11
17									22	23	16	11
18									23	18	15	11
19									20	16	13	11
20									20	16	13	11
21									48	14	12	11
22									125	14	11	11
23									26	14	11	10
24									20	13	11	10
25									19	40	11	10
26									18	16	11	9.0
27									19	15	12	9.0
28									24	37	20	9.0
29									23	16	12	8.8
30									33	14	11	8.8
31									---	92	25	---
TOTAL	---	---	---	---	---	---	---	---	---	1025	735	342.0
MEAN	---	---	---	---	---	---	---	---	---	33.1	23.7	11.4
MAX	---	---	---	---	---	---	---	---	---	257	96	38
MIN	---	---	---	---	---	---	---	---	---	13	11	8.8
CFSM	---	---	---	---	---	---	---	---	---	1.23	.88	.42
IN.	---	---	---	---	---	---	---	---	---	1.41	1.01	.47

01591700 HAWLINGS RIVER NEAR SANDY SPRING, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	10	18	50	35	144	43	29	129	28	20	15
2	8.8	10	17	300	33	130	42	28	44	34	35	20
3	8.8	10	15	60	32	86	50	28	265	21	20	16
4	8.8	10	40	46	32	76	66	29	137	22	16	15
5	10	10	60	36	31	170	65	31	61	24	15	350
6	28	10	26	34	30	137	44	28	46	19	13	1000
7	11	10	20	50	29	75	38	26	41	18	13	60
8	9.5	10	19	170	29	59	37	26	36	17	13	40
9	8.8	10	160	55	28	52	70	25	34	16	20	35
10	9.6	10	50	44	28	49	76	24	32	16	30	30
11	9.4	10	28	38	28	94	46	23	32	17	16	28
12	9.0	10	24	36	28	55	42	23	30	16	75	26
13	8.8	10	23	36	29	48	41	56	27	16	30	25
14	8.8	10	21	75	29	47	51	54	26	21	18	28
15	8.8	10	20	34	29	42	42	31	25	19	15	26
16	8.9	13	19	30	29	39	38	36	25	16	14	24
17	10	16	19	28	27	39	36	26	45	15	13	22
18	9.5	38	18	26	27	39	34	25	39	14	13	20
19	9.5	14	19	26	29	37	34	37	28	14	13	20
20	9.5	12	24	100	30	37	33	29	25	16	13	20
21	8.8	11	29	650	32	36	32	27	24	20	50	130
22	8.8	10	21	90	42	35	32	26	24	16	25	300
23	8.8	11	19	60	52	35	32	34	23	15	18	75
24	8.8	12	50	605	351	175	32	125	22	14	25	40
25	8.8	11	180	129	907	95	31	57	21	13	35	36
26	9.9	11	51	57	772	53	32	47	20	14	25	34
27	11	15	31	48	211	44	46	34	19	13	20	32
28	10	20	24	47	175	41	38	31	19	13	26	32
29	10	23	21	45	---	40	33	30	20	16	20	31
30	10	45	20	41	---	39	30	28	21	37	18	30
31	10	---	23	39	---	39	---	26	---	15	16	---
TOTAL	309.2	412	1109	3085	3134	2087	1266	1079	1339	565	693	2560
MEAN	9.97	13.7	35.8	99.5	112	67.3	42.2	34.8	44.6	18.2	22.4	85.3
MAX	28	45	180	650	907	175	76	125	265	37	75	1000
MIN	8.8	10	15	26	27	35	30	23	19	13	13	15
CFSM	.37	.51	1.33	3.69	4.15	2.49	1.56	1.29	1.65	.67	.83	3.16
IN.	.43	.57	1.53	4.25	4.32	2.88	1.74	1.49	1.84	.78	.95	3.53

WTR YR 1979 TOTAL 17638.2 MEAN 48.3 MAX 1000 MIN 8.8 CFSM 1.79 IN 24.30

01591700 HAWLINGS RIVER NEAR SANDY SPRING, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1500	41	35	28	26	21	122	150	38	22	12	6.9
2	120	42	34	27	24	23	64	55	38	19	13	6.3
3	130	59	33	27	24	22	54	90	52	54	16	5.8
4	80	44	33	27	24	22	73	48	62	27	13	5.8
5	160	41	34	29	23	49	54	44	35	21	12	16
6	80	40	34	28	24	40	45	40	41	20	11	8.1
7	55	40	34	27	24	30	42	38	68	17	10	6.9
8	50	38	32	28	24	33	41	38	40	28	10	5.8
9	100	39	31	28	24	47	92	36	32	27	10	5.2
10	516	86	31	26	25	30	56	35	34	35	10	8.7
11	137	86	31	51	24	27	45	35	31	21	35	6.3
12	94	94	31	89	24	24	41	35	29	18	13	5.2
13	86	57	44	38	23	143	42	38	28	18	11	5.2
14	64	56	42	37	23	200	55	32	27	16	10	5.2
15	57	46	34	41	24	74	85	30	30	15	11	5.2
16	54	43	34	34	27	48	47	29	40	15	18	4.7
17	53	40	32	32	24	46	40	28	31	14	11	5.2
18	50	39	29	108	22	54	39	60	27	13	13	12
19	47	38	30	130	23	39	38	40	26	13	13	6.9
20	46	37	31	49	22	36	36	60	25	12	13	5.2
21	46	37	31	40	24	216	34	210	24	12	11	5.8
22	45	37	31	42	36	78	32	60	24	28	11	5.8
23	50	36	31	50	32	50	32	50	23	30	11	5.8
24	67	36	32	35	34	44	32	280	22	16	9.9	4.7
25	47	36	70	34	31	50	32	80	21	14	9.2	10
26	44	94	39	33	27	40	34	55	21	13	8.1	8.7
27	43	57	33	31	24	37	45	46	22	13	7.5	5.8
28	43	43	31	31	24	38	70	40	19	13	7.5	5.2
29	43	39	30	30	23	166	100	38	33	14	6.9	5.2
30	42	36	29	28	---	65	50	35	35	13	6.9	5.2
31	41	---	28	27	---	180	---	48	---	12	6.9	---
TOTAL	3990	1457	1054	1265	733	1972	1572	1903	978	603	360.9	198.8
MEAN	129	48.6	34.0	40.8	25.3	63.6	52.4	61.4	32.6	19.5	11.6	6.63
MAX	1500	94	70	130	36	216	122	280	68	54	35	16
MIN	41	36	28	26	22	21	32	28	19	12	6.9	4.7
CFSM	4.78	1.80	1.26	1.51	.94	2.36	1.94	2.27	1.21	.72	.43	.25
IN.	5.50	2.01	1.45	1.74	1.01	2.72	2.17	2.62	1.35	.83	.50	.27

CAL YR 1979 TOTAL 22309.0 MEAN 61.1 MAX 1500 MIN 13 CFSM 2.26 IN 30.74
WTR YR 1980 TOTAL 16086.7 MEAN 44.0 MAX 1500 MIN 4.7 CFSM 1.63 IN 22.16

01592500 PATUXENT RIVER NEAR LAUREL, MD

LOCATION.--Lat 39°06'56", long 76°52'27", Prince Georges County, Hydrologic Unit 02060006, on right bank at Rocky Gorge pumping station, 600 ft (180 m) downstream from T. Howard Duckett Reservoir, 0.7 mi (1.1 km) upstream from Walker Branch, 1.3 mi (2.1 km) northwest of Laurel, and 81 mi (130 km) upstream from mouth.

DRAINAGE AREA.--132 mi² (342 km²).

PERIOD OF RECORD.--October 1944 to current year.

REVISED RECORDS.--WDR MD-DE-78-1: 1976(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 153.5 ft (46.79 m) National Geodetic Vertical Datum of 1929 (levels by Washington Suburban Sanitary Commission). Prior to Oct. 1, 1955, water-stage recorder and concrete control at site 0.3 mi (0.5 km) downstream at different datum. Oct. 1, 1955, to Sept. 30, 1956, nonrecording gage at present site at datum 1.2 ft (0.37 m) lower. Oct. 1, 1956, to Jan. 27, 1957, nonrecording gage at present site and datum. Jan. 28, 1957, to May 3, 1972, water-stage recorder and concrete control at present site and datum. May 4, 1972, to Sept. 4, 1973, nonrecording gage at present site and datum.

REMARKS.--Records good. Records do not include diversion at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Flow regulated by Triadelphia Reservoir, and since March 1954 by T. Howard Duckett Reservoir, combined usable capacity, 12,500,000,000 gal (47.31 hm³); dead storage, 80,000,000 gal (302,800 m³). Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 26,000 ft³/s (736 m³/s) June 22, 1972, gage height, about 25 ft (7.6 m), from floodmarks, from rating curve extended above 6,600 ft³/s (187 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.10 ft³/s (0.003 m³/s) Sept. 25, 1964, (valve closed for repair); minimum daily, 1.1 ft³/s (0.031 m³/s) June 26, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,640 ft³/s (46.4 m³/s) Oct. 4, gage height, 8.96 ft (2.731 m); minimum daily discharge, 18 ft³/s (0.51 m³/s) many days Jan., Feb., Aug., and Sept.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	390	36	138	144	18	20	388	197	285	23	21	21
2	986	152	137	141	18	20	438	283	242	22	21	21
3	1370	197	67	141	18	189	438	353	199	20	21	21
4	1580	32	20	144	18	352	180	343	199	20	21	21
5	608	33	20	140	18	136	135	265	201	20	22	21
6	1260	33	84	140	18	58	135	127	125	20	18	21
7	944	33	196	90	18	85	136	128	83	21	189	21
8	528	27	294	19	81	85	180	130	85	20	247	21
9	334	22	294	20	136	85	234	130	86	40	44	21
10	333	20	272	20	135	85	232	130	84	69	44	21
11	170	19	179	20	138	85	233	130	48	73	86	21
12	37	19	126	20	139	85	310	131	21	73	25	19
13	37	19	138	20	108	77	372	130	21	74	26	18
14	37	20	138	20	89	274	225	130	21	73	89	18
15	540	20	138	19	63	247	200	129	21	41	21	18
16	883	20	138	45	18	140	200	443	22	21	21	18
17	881	20	87	327	18	255	158	461	22	21	21	18
18	365	20	22	326	19	240	119	258	22	21	21	18
19	44	20	23	169	19	130	118	128	22	21	21	18
20	34	20	22	137	25	109	118	102	22	21	21	18
21	34	20	65	137	137	567	58	136	22	21	21	20
22	35	20	146	137	196	787	23	138	22	21	21	20
23	35	20	148	137	110	676	23	137	23	21	21	20
24	36	20	292	292	109	89	127	131	22	21	21	20
25	35	20	218	714	76	60	239	154	23	21	29	19
26	35	20	133	489	29	28	264	155	22	21	39	19
27	35	159	68	85	30	23	282	209	23	21	24	19
28	35	325	24	60	30	90	470	251	23	21	26	18
29	35	234	24	18	26	87	449	248	23	21	24	18
30	35	138	25	18	---	447	233	262	23	21	21	18
31	36	---	130	18	---	473	---	286	---	21	21	---
TOTAL	11747	1758	3806	4207	1857	6084	6717	6235	2057	945	1268	585
MEAN	379	58.6	123	136	64.0	196	224	201	68.6	30.5	40.9	19.5
MAX	1580	325	294	714	196	787	470	461	285	74	247	21
MIN	34	19	20	18	18	20	23	102	21	20	18	18
(†)	9380	11070	11660	11600	11430	11590	11740	11690	11470	11680	11850	9340
(*)	73.2	67.2	60.7	62.9	64.7	56.9	40.6	65.2	76.8	76.8	72.3	61.8

CAL YR 1979 TOTAL 84474 MEAN 231 MAX 3060 MIN 16 *70.1
WTR YR 1980 TOTAL 47266 MEAN 129 MAX 1580 MIN 18 *65.0

† Combined month-end total contents, millions of gallons, in Tridelphia and T. Howard Duckett Reservoirs, contents on Sept. 30, 1979: 9,840,000,000 gal (37.24 hm³); furnished by Washington Suburban Sanitary Commission.

* Diversions, in cubic feet per second, above station at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Records furnished by Washington Suburban Sanitary Commission.

01593500 LITTLE PATUXENT RIVER AT GUILFORD, MD

LOCATION.--Lat 39°10'04", long 76°51'07", Howard County, Hydrologic Unit 02060006, on left bank 75 ft (23 m) upstream from bridge on State Highway 32, 1 mi (1.6 km) west of Guilford, 3 mi (4.8 km) upstream from Middle Patuxent River, 4 mi (6.4 km) north of Laurel, and 20.1 mi (32.3 km) upstream from mouth.

DRAINAGE AREA.--38.0 mi^2 (98.4 km^2).

PERIOD OF RECORD.--April 1932 to current year. Monthly discharge only for April 1932, published in WSP 1302.

REVISED RECORDS.--WSP 1502: 1933, 1934(M), 1939(M), 1945(M), 1948(P).

GAGE.--Water-stage recorder. Concrete control since June 20, 1946. Altitude of gage is 260 ft (79.2 m), from topographic map. Prior to June 25, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good except for the period of no gage-height record, Oct. 1-2, which is fair. Low flow affected by regulation from unknown source. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--48 years, 43.1 ft^3/s (1.221 m^3/s), 15.40 in/yr (391 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft^3/s (351 m^3/s) June 22, 1972, gage height, 18.38 ft (5.602 m), from high-water mark in well, from rating curve extended above 1,800 ft^3/s (51.0 m^3/s) on basis of contracted-opening measurement at gage height 13.26 ft (4.042 m) and contracted-opening and flow-over-embankment measurement at gage height 18.38 ft (5.602 m); no flow Sept. 8, and parts of Sept. 6, 7, 9-12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,110 ft^3/s (31.4 m^3/s) Oct. 1, gage height, 8.71 ft (2.655 m) no other peak above base of 800 ft^3/s (22 m^3/s); minimum recorded, 6.5 ft^3/s (0.18 m^3/s) Sept. 1, 2, 3, 4, 5, 16, 17, may have been lower during period of no gage-height record Sept. 18-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	550	44	45	36	34	30	130	166	30	24	14	7.6
2	170	45	44	36	34	32	72	93	35	22	15	7.6
3	236	78	42	36	34	34	62	167	128	92	35	7.1
4	86	50	42	36	33	34	87	73	94	41	35	7.0
5	120	43	42	40	33	68	60	59	39	25	18	16
6	95	43	42	40	33	57	48	51	36	23	15	12
7	62	42	42	39	33	40	46	47	46	20	13	9.7
8	52	41	40	40	32	42	45	50	39	38	12	8.0
9	104	42	38	38	32	68	114	46	30	30	11	7.4
10	513	125	39	36	35	40	77	43	34	24	11	13
11	143	100	39	73	33	38	54	40	31	21	23	8.6
12	102	122	38	143	33	32	48	40	28	19	16	8.3
13	101	72	72	54	30	153	47	40	27	18	13	7.8
14	73	74	65	47	30	311	57	36	27	16	11	7.3
15	64	57	45	46	32	95	101	32	34	16	15	7.4
16	61	53	43	41	40	58	57	31	50	15	23	6.7
17	58	49	42	39	35	64	47	30	32	16	13	7.2
18	55	48	38	115	30	97	45	104	27	14	14	16
19	53	46	38	170	30	55	44	64	26	14	15	12
20	52	44	39	62	31	47	43	71	25	14	14	9.0
21	50	44	39	49	33	297	42	128	23	16	12	8.4
22	48	42	40	58	56	109	41	64	23	56	11	8.2
23	56	43	40	78	44	61	41	43	23	57	11	8.0
24	86	42	43	46	46	55	44	47	23	23	11	7.8
25	54	41	99	43	48	80	48	57	23	15	9.8	14
26	49	266	53	41	40	51	60	35	22	16	9.0	12
27	47	99	42	39	33	45	135	31	22	14	8.5	10
28	48	66	40	38	34	46	145	29	21	14	8.7	9.0
29	48	53	39	38	32	191	166	29	61	17	8.4	8.8
30	45	48	38	35	---	84	81	27	52	14	8.3	8.6
31	44	---	37	34	---	189	---	32	---	13	7.9	---
TOTAL	3325	1962	1385	1666	1023	2603	2087	1805	1111	757	441.6	280.5
MEAN	107	65.4	44.7	53.7	35.3	84.0	69.6	58.2	37.0	24.4	14.2	9.35
MAX	550	266	99	170	56	311	166	167	128	92	35	16
MIN	44	41	37	34	30	30	41	27	21	13	7.9	6.7
CFSM	2.82	1.72	1.18	1.41	.93	2.21	1.83	1.53	.97	.64	.37	.25
IN.	3.25	1.92	1.36	1.63	1.00	2.55	2.04	1.77	1.09	.74	.43	.27

CAL YR 1979 TOTAL 31144.0 MEAN 85.3 MAX 2140 MIN 21 CFSM 2.25 IN 30.49
WTR YR 1980 TOTAL 18446.1 MEAN 50.4 MAX 550 MIN 6.7 CFSM 1.33 IN 18.06

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD

LOCATION.--Lat 39°08'00", long 76°48'58", Howard County, Hydrologic Unit 02060006, on left bank 500 ft (150 m) downstream from bridge on U.S. Highway 1, 0.5 mi (0.8 km) southeast of Savage, 1.0 mi (1.6 km) downstream from Middle Patuxent River, and 16.1 mi (25.9 km) upstream from mouth.

DRAINAGE AREA.--98.4 mi² (254.9 km²).

PERIOD OF RECORD.--October 1939 to September 1958. Annual maximum, water years 1959-66, 68, 72, 75. October 1975 to September 1980 (discontinued). Prior to December 1939 monthly discharge only, published in WSP 1302.

GAGE.--Water-stage recorder. Altitude of gage is 125 ft (38.1 m), from topographic map. Prior to 1958, water-stage recorder at site 100 ft (30 m) upstream at same datum. October 1958 to September 1972, crest-stage gage 100 ft (30 m) upstream on right bank at same datum.

REMARKS.--Records good. Some diurnal fluctuation at low flow caused by plant 0.5 mi (0.8 km) upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years (water years 1940-58, 1976-80), 109 ft³/s (3.087 m³/s), 15.04 in/yr (382 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,400 ft³/s (1,000 m³/s) June 22, 1972; gage height, 25.4 ft (7.74 m), from floodmarks, from rating curve extended above 11,000 ft³/s (312 m³/s) on basis of contracted-opening measurement of peak flow; minimum daily, 7.0 ft³/s (0.20 m³/s) Sept. 19, 1943.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1930	*3640	103	9.70	2.957	Mar. 14	0045	2070	58.6	7.69	2.344
Oct. 10	1145	2860	81.0	8.76	2.670						

Minimum discharge, 20 ft³/s (0.57 m³/s) Sept. 24, 25, gage height, 2.60 ft (0.792 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1800	129	131	100	95	85	436	462	100	70	50	22
2	430	132	128	99	100	85	217	238	125	63	44	23
3	755	197	122	98	100	90	181	429	279	176	75	22
4	269	151	120	98	100	95	238	193	288	110	103	21
5	467	131	123	105	100	146	181	158	107	72	51	33
6	309	127	123	100	100	148	148	141	96	65	41	33
7	196	126	122	105	100	109	139	130	123	56	37	27
8	169	121	115	106	95	106	135	132	103	81	35	23
9	284	124	109	103	90	152	314	127	83	82	32	21
10	1680	321	110	97	90	106	216	118	89	66	32	28
11	496	246	112	144	90	101	158	117	86	59	60	24
12	302	352	111	370	90	89	142	120	78	54	50	21
13	315	186	150	142	90	310	138	118	77	50	41	21
14	222	190	163	127	85	928	153	108	75	48	35	20
15	196	154	119	128	87	260	248	98	82	46	37	21
16	183	145	114	116	99	157	152	95	114	45	66	21
17	178	136	112	110	90	154	132	92	88	44	37	20
18	170	134	103	242	80	224	128	263	75	44	36	42
19	162	129	103	547	80	144	124	163	73	41	42	31
20	158	126	105	177	85	127	121	185	72	40	43	25
21	153	126	105	144	88	822	119	378	65	42	36	25
22	146	125	106	144	127	322	115	201	63	98	34	25
23	157	125	107	203	116	176	115	131	63	125	32	23
24	229	125	110	132	117	154	118	134	61	64	31	20
25	155	123	217	122	120	202	127	157	62	49	29	40
26	143	689	140	118	107	145	137	112	60	45	27	39
27	137	271	115	111	92	130	311	98	61	44	26	28
28	140	176	108	110	91	127	374	94	57	42	25	25
29	142	151	106	110	85	560	430	90	113	45	24	25
30	133	137	104	102	---	233	203	87	133	43	24	24
31	129	---	103	100	---	565	---	110	---	40	23	---
TOTAL	10405	5405	3716	4510	2789	7052	5750	5079	2951	1949	1258	773
MEAN	336	180	120	145	96.2	227	192	164	98.4	62.9	40.6	25.8
MAX	1800	689	217	547	127	928	436	462	288	176	103	42
MIN	129	121	103	97	80	85	115	87	57	40	23	20
CFSM	3.42	1.83	1.22	1.47	.98	2.31	1.95	1.67	1.00	.64	.41	.26
IN.	3.93	2.04	1.40	1.70	1.05	2.67	2.17	1.92	1.12	.74	.48	.29

CAL YR 1979 TOTAL 83953 MEAN 230 MAX 5250 MIN 51 CFSM 2.34 IN 31.74
WTR YR 1980 TOTAL 51637 MEAN 141 MAX 1800 MIN 20 CFSM 1.43 IN 19.52

01594440 PATUXENT RIVER NEAR BOWIE, MD

LOCATION.--Lat 38°57'21", long 76°41'36", Anne Arundel County, Hydrologic Unit 02060006, on left bank 45 ft (14 m) upstream from bridge on U.S. Highway 50 (John Hanson Highway), 3.0 mi (4.8 km) west of Bowie City Hall, 3.1 mi (5.0 km) downstream from mouth of Little Patuxent River, 4.2 mi (6.8 km) northwest of Davidsonville, and 60 mi (97 km) upstream from mouth.

DRAINAGE AREA.--348 mi² (901 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1955 to June 1977 (gage heights and discharge measurements only), August 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 13.10 ft (3.993 m) National Geodetic Vertical Datum of 1929. Prior to June 27, 1977, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. Some regulation at low flow by Rocky Gorge Dam, 21 mi (34 km) above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,100 ft³/s (881 m³/s) June 22, 1972, gage height, 27.9 ft (8.50 m), from floodmarks, on basis of contracted opening measurement of peak flow; minimum observed, 32 ft³/s (0.91 m³/s); minimum daily 61 ft³/s (1.73 m³/s) Sept. 14, 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 2	1430	3650	103	11.78	3.591	Mar. 14	2130	2540	71.9	10.68	3.255
Oct. 4	0200	3030	85.8	11.19	3.411	Mar. 22	1100	2440	69.1	10.58	3.225
Oct. 6	0200	3040	86.1	11.20	3.414	Apr. 1	1030	2240	63.4	10.35	3.155
Oct. 11	1100	*3940	112	12.06	3.676	Apr. 29	1630	2200	62.3	10.30	3.139
Jan. 19	1800	2090	59.2	10.17	3.100						

Minimum discharge, 91 ft³/s (2.58 m³/s) Sept. 12, 25, gage height, 3.81 ft (1.161 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	940	295	447	334	207	192	2040	1130	588	204	129	100
2	2960	298	423	343	195	188	1220	1180	556	167	198	100
3	2170	551	403	341	207	190	949	1130	517	274	140	101
4	2480	681	317	338	203	389	1050	1050	879	410	275	97
5	2370	347	278	355	194	695	856	836	567	213	179	106
6	2470	312	271	360	194	462	571	665	454	183	164	115
7	1430	301	342	360	197	352	519	480	456	157	131	119
8	1430	292	449	303	193	324	500	470	376	180	282	103
9	1170	289	550	252	265	361	689	466	307	253	301	100
10	1740	379	561	231	317	333	1060	430	288	300	145	108
11	3350	742	542	250	314	290	783	416	287	225	156	108
12	1220	862	412	824	320	267	658	428	232	209	206	99
13	815	660	378	560	304	333	707	441	203	213	140	96
14	632	492	556	331	261	1640	781	429	197	191	123	96
15	473	407	424	306	263	1480	757	378	205	187	179	95
16	748	354	384	275	263	790	673	358	385	151	234	93
17	1130	328	376	417	255	546	553	606	293	174	147	96
18	1190	308	300	656	196	729	484	899	215	215	131	109
19	925	294	235	1570	186	725	432	961	200	144	137	118
20	390	285	235	972	194	483	421	703	192	133	134	105
21	344	276	234	548	212	744	410	832	183	135	128	103
22	330	274	281	486	397	2070	323	920	174	280	122	102
23	329	269	357	715	498	1360	292	540	172	608	127	100
24	530	267	376	600	366	1170	285	555	174	257	164	95
25	422	264	642	750	384	740	479	1290	167	177	121	155
26	339	510	716	994	349	516	570	643	164	172	125	156
27	319	1290	405	786	242	397	917	474	164	152	127	116
28	317	738	291	363	223	360	1830	502	161	139	109	105
29	323	778	249	298	222	924	1980	523	155	147	110	102
30	310	621	242	248	---	1250	1390	513	343	139	108	103
31	297	---	245	228	---	1210	---	530	---	129	104	---
TOTAL	33893	13764	11921	15394	7621	21510	24179	20778	9254	6518	4876	3201
MEAN	1093	459	385	497	263	694	806	670	308	210	157	107
MAX	3350	1290	716	1570	498	2070	2040	1290	879	608	301	156
MIN	297	264	234	228	186	188	285	358	155	129	104	93
CFSM	3.14	1.32	1.11	1.43	.76	1.99	2.32	1.93	.89	.60	.45	.31
IN.	3.62	1.47	1.27	1.65	.81	2.30	2.58	2.22	.99	.70	.52	.34

CAL YR 1979 TOTAL 271828 MEAN 745 MAX 8470 MIN 153 CFSM 2.14 IN 29.06
WTR YR 1980 TOTAL 172909 MEAN 472 MAX 3350 MIN 93 CFSM 1.36 IN 18.48

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1977 to current year.
WATER TEMPERATURES: December 1977 to current year.

REMARKS.--Daily samples collected by a local observer.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)
OCT 17...	1430	1170	136	7.6	23.0	14.0	1.0	8.2	120	380	35
NOV 27...	1500	1300	160	7.4	13.0	14.5	25	8.4	K6800	9200	36
DEC 17...	1330	379	160	7.3	-1.0	5.0	.40	10.7	K7	K7	44
JAN 14...	1400	326	231	7.1	6.0	3.5	.60	11.4	K2	K15	49
FEB 11...	1400	313	275	6.8	3.5	1.0	3.5	12.4	<1	K2	43
MAR 26...	1030	475	170	6.3	9.5	7.4	2.5	9.9	K2	K2	44
APR 16...	1230	649	150	7.2	10.5	12.5	4.0	9.1	K30	76	39
MAY 13...	1330	386	155	6.2	30.0	17.5	7.0	7.1	100	210	44
JUN 18...	0930	225	196	6.2	22.0	17.5	1.2	6.2	120	77	52
JUL 14...	1045	159	195	7.4	28.0	22.0	24	5.1	80	800	46
AUG 13...	1000	111	190	7.5	26.0	23.5	17	4.6	63	160	52
SEP 29...	1130	79	250	7.2	23.0	17.5	.60	6.1	89	32	54

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 17...	5	10	2.5	6.3	32	.5	2.9	30	10	11	.1
NOV 27...	11	10	2.6	8.0	37	.6	4.0	25	13	12	.1
DEC 17...	0	12	3.5	9.3	30	.6	2.7	32	12	14	.1
JAN 14...	18	14	3.4	19	52	1.2	3.1	31	18	32	.2
FEB 11...	21	12	3.2	27	56	1.8	2.6	22	15	43	.2
MAR 26...	25	12	3.3	15	41	1.0	2.3	19	14	21	.1
APR 16...	6	11	2.8	11	36	.8	2.3	33	11	17	.1
MAY 13...	24	12	*3.5	13	37	.9	2.4	20	13	16	.2
JUN 18...	28	15	3.5	16	38	1.0	3.5	24	17	21	.2
JUL 14...	20	13	3.3	14	38	.9	3.7	26	13	19	.2
AUG 13...	18	15	3.6	14	35	.8	3.9	34	14	19	.3
SEP 29...	30	16	3.5	20	42	1.2	4.7	24	18	26	.4

K Results based on colony count outside the acceptable range (non-ideal colony count).

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)
OCT 17...	8.9	73	75	.10	231	1.3	1.2	.15	.15	.18	.19
NOV 27...	7.5	92	77	.13	323	1.2	1.1	.16	.19	.19	.24
DEC 17...	22	102	1110	1.51	104	2.0	1.8	.25	--	.30	--
JAN 14...	10	117	125	.16	103	1.6	1.6	.74	.68	.90	.88
FEB 11...	10	132	135	.18	112	2.1	2.0	.80	.58	.97	.75
MAR 26...	10	116	99	.16	149	1.7	2.1	.35	.34	.42	.44
APR 16...	7.6	95	90	.13	166	1.7	1.7	.39	.33	.47	.43
MAY 13...	8.9	93	90	.13	96.9	2.4	2.1	.11	--	.13	--
JUN 18...	11	127	113	.17	77.2	2.6	2.5	.61	.66	.74	.85
JUL 14...	9.1	131	103	.18	56.2	2.9	2.8	.33	.41	.40	.53
AUG 13...	10	131	111	.18	39.3	2.5	2.5	.42	.42	.51	.54
SEP 29...	12	140	133	.19	29.9	3.9	3.9	1.5	1.4	1.8	1.8

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
OCT 17...	.51	.49	.66	.02	.64	2.0	1.8	8.7	.200	.61	.080
NOV 27...	.94	.54	1.1	.37	.73	2.3	1.8	10	.330	1.0	.090
DEC 17...	.55	--	.80	--	--	2.8	--	12	.430	.03	.270
JAN 14...	.66	.62	1.4	.10	1.3	3.0	2.9	13	.410	1.3	.340
FEB 11...	--	.52	--	--	1.1	--	3.1	--	.490	1.5	.400
MAR 26...	.52	.22	.87	.31	.56	2.6	2.7	11	.420	1.3	.260
APR 16...	.41	.38	.80	.09	.71	2.5	2.4	11	.360	1.1	.210
MAY 13...	.22	--	.33	--	--	2.7	--	12	.480	1.5	.320
JUN 18...	.69	.44	1.3	.20	1.1	3.9	3.6	17	.760	2.3	.540
JUL 14...	.97	.13	1.3	.76	.54	4.2	3.3	19	.700	2.1	.460
AUG 13...	.46	.29	.88	.17	.71	3.4	3.2	15	.640	2.0	.520
SEP 29...	.30	.30	1.8	.10	1.7	5.7	5.6	25	1.200	3.7	1.000

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)
NOV 27...	--	--	--	--	--	--	--	--	--	--	--
DEC 17...	0	--	1	50	20	30	0	--	0	20	--
FEB 11...	--	--	--	--	--	--	--	--	--	--	--
MAR 26...	2	0	2	100	60	40	0	0	1	10	<0
MAY 13...	--	--	--	--	--	--	--	--	--	--	--
JUN 18...	1	0	1	50	--	30	0	0	4	20	--
AUG 13...	--	--	--	--	--	--	--	--	--	--	--
SEP 29...	1	0	1	100	0	100	0	0	0	10	--

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)
NOV										
27...	--	--	--	--	--	--	--	--	--	--
DEC										
17...	10	1	--	0	5	--	3	1000	--	70
FEB										
11...	--	--	--	--	--	--	--	--	--	--
MAR										
26...	10	2	1	1	9	6	3	1700	1600	110
MAY										
13...	--	--	--	--	--	--	--	--	--	--
JUN										
10...	10	0	0	0	6	0	6	2200	2100	70
AUG										
13...	--	--	--	--	--	--	--	--	--	--
SEP										
29...	10	0	0	0	5	1	4	1100	1000	70

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
NOV										
27...	--	--	--	--	--	--	--	--	--	--
DEC										
17...	8	--	0	320	--	140	.1	--	.2	4
FEB										
11...	--	--	--	--	--	--	--	--	--	--
MAR										
26...	4	4	0	160	30	130	.1	.0	.1	8
MAY										
13...	--	--	--	--	--	--	--	--	--	--
JUN										
10...	6	6	0	210	40	170	.1	--	.1	3
AUG										
13...	--	--	--	--	--	--	--	--	--	--
SEP										
29...	3	3	0	160	0	160	.1	.0	.1	7

DATE	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
NOV										
27...	--	--	--	--	0	--	--	--	--	--
DEC										
17...	--	0	--	--	0	0	0	20	--	10
FEB										
11...	--	--	--	--	0	--	--	--	--	--
MAR										
26...	5	3	0	0	0	0	0	90	80	10
MAY										
13...	--	--	--	--	0	--	--	--	--	--
JUN										
10...	1	2	0	0	0	0	0	20	10	7
AUG										
13...	--	--	--	--	0	--	--	--	--	--
SEP										
29...	4	3	0	0	0	0	0	60	60	0

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)
OCT				
17...	4.1	--	--	--
NOV				
27...	7.1	--	--	4400
DEC				
17...	--	2.4	.1	--
JAN				
14...	4.9	--	--	--
FEB				
11...	1.3	--	--	--
MAR				
26...	--	3.8	1.1	610

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)
APR				
16...	9.2	--	--	--
MAY				
13...	3.0	--	--	810
JUN				
18...	--	3.8	1.2	590
JUL				
14...	4.0	--	--	--
AUG				
13...	6.6	--	--	4400
SEP				
29...	--	--	.6	700

DATE	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
JUL					
23-31	5.12	5.91	129	6.14	1.05
AUG					
01-24	5.12	5.91	129	6.14	1.05
25-31	6.38	7.95	226	6.95	1.44

DATE	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
SEP					
01-29	6.38	7.95	226	6.95	1.44

DATE	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT			
17...	18	57	92
NOV			
27...	90	316	71
DEC			
17...	15	15	61
JAN			
14...	27	24	98
FEB			
11...	9	7.6	96

DATE	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR			
26...	42	54	89
APR			
16...	49	86	84
JUN			
18...	48	29	89
AUG			
13...	34	10	94
SEP			
29...	14	3.8	95

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	197	168	160	220	---	135	150	150	208	230	
2	---	197	168	155	---	260	160	149	---	---	224	
3	117	167	165	160	---	205	139	152	160	188	240	
4	106	173	160	---	160	195	145	141	155	224	---	
5	94	180	188	160	215	205	---	---	160	---	220	
6	113	185	193	205	180	265	---	---	205	190	200	
7	113	185	195	280	220	300	149	149	170	220	218	
8	116	190	148	320	215	240	151	171	180	200	155	
9	138	190	148	310	215	230	166	---	190	230	190	
10	98	190	140	300	185	---	---	171	200	---	198	
11	---	170	148	260	265	235	---	---	190	225	208	
12	148	---	173	250	235	215	160	---	205	---	213	
13	160	185	165	230	188	---	151	184	225	208	---	
14	167	---	---	210	195	230	150	---	205	205	---	
15	175	190	170	195	245	210	171	180	---	---	225	
16	134	195	165	195	193	200	165	172	---	---	---	
17	120	142	170	148	215	175	164	180	---	120	212	
18	118	190	190	140	---	188	174	223	---	220	200	
19	168	195	183	148	160	180	---	---	---	260	---	
20	185	195	200	155	---	200	174	166	---	---	---	
21	188	185	200	155	---	195	175	---	215	219	240	
22	188	185	188	155	210	165	173	166	235	---	233	
23	195	---	170	160	215	134	---	---	220	218	225	
24	198	185	165	165	240	140	165	---	---	---	240	
25	190	185	150	126	185	148	199	---	210	190	243	
26	195	180	155	122	215	188	155	162	---	---	230	
27	194	150	173	150	210	188	170	---	---	228	245	
28	192	146	188	180	165	170	101	176	235	---	227	
29	195	102	190	190	215	---	125	155	245	227	235	
30	200	160	185	195	---	---	---	150	190	225	270	
31	200	---	190	124	---	---	---	151	---	225	255	
MEAN	157	178	173	190	207	202	157	166	197	212	223	

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	13.0	6.0	6.0	3.5	---	---	14.0	22.0		---	
2	17.5	14.0	6.0	6.0	---	1.5	---	15.0	---		---	
3	19.5	15.0	5.0	5.0	---	2.5	---	---	21.0		24.0	
4	17.0	13.0	5.0	---	4.0	2.5	---	---	20.0		---	
5	20.0	11.5	6.0	5.0	5.0	6.5	---	---	20.0		26.0	
6	16.0	10.0	6.0	3.0	6.0	8.0	---	---	19.0		25.0	
7	13.5	10.0	6.0	3.5	7.0	6.0	---	---	20.0		26.0	
8	15.5	12.0	9.0	4.5	5.0	8.0	---	---	22.0		23.0	
9	15.0	11.0	6.5	5.0	---	10.0	---	---	21.0		25.0	
10	11.5	---	6.0	5.0	---	---	---	---	20.0		24.0	
11	---	---	7.0	5.5	---	8.0	---	---	18.0		24.0	
12	12.0	---	---	5.5	---	7.0	---	---	17.0		23.0	
13	14.0	---	9.0	5.0	---	---	---	---	18.0		---	
14	12.5	---	---	5.0	---	---	---	---	17.0		---	
15	---	---	6.5	7.0	---	---	---	---	---		---	
16	14.5	---	7.0	7.0	---	7.0	---	---	---		---	
17	15.0	---	7.0	6.0	---	8.0	---	---	---		20.0	
18	14.5	---	---	6.5	---	9.0	---	---	---		20.0	
19	20.0	---	6.0	6.0	---	10.0	---	---	---		19.0	
20	20.0	16.0	4.0	5.5	---	11.0	---	---	---		20.0	
21	21.0	---	4.5	5.0	---	10.0	---	---	22.0		19.0	
22	19.5	---	6.0	5.5	---	10.0	---	---	---		19.0	
23	18.0	---	7.0	5.5	---	9.5	---	---	21.0		19.0	
24	14.5	---	9.0	---	---	9.0	---	---	---		20.5	
25	---	---	9.0	4.5	6.0	---	---	---	22.0		21.0	
26	---	16.0	8.5	5.0	5.0	---	---	---	---		21.0	
27	---	13.0	7.5	4.5	5.0	---	---	---	---		20.0	
28	---	12.0	7.0	5.0	---	---	12.0	18.0	22.5		20.0	
29	---	9.0	7.0	6.0	6.0	---	15.0	18.0	21.0		19.0	
30	---	8.0	---	---	---	---	14.0	19.0	22.0		19.0	
31	---	---	6.5	---	---	---	---	20.0	---		---	
MEAN	16.5	12.0	6.5	5.5	5.5	7.5	13.5	17.5	20.5		21.5	

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

PHYTOPLANKTON ANALYSES, AUGUST 1979 TO SEPTEMBER 1979

		AUG 15,79		SEP 26,79	
DATE		AUG 15,79		SEP 26,79	
TIME		1500		1300	
TOTAL CELLS/ML		110000		9900	
DIVERSITY: DIVISION		1.4		0.3	
	.CLASS	1.4		0.3	
	..ORDER	1.5		0.4	
	...FAMILY	2.0		0.5	
	....GENUS	2.7		0.5	

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...CHARACIACEAE				
....SCHROEDERIA	*	0	--	-
...COELASTRACEAE				
....COELASTRUM	6700	6	--	-
...OOCYSTACEAE				
....ANKISTRODESMUS	2400	2	64	1
....CHODATELLA	*	0	--	-
....GLOEOACTINIUM	2900	3	--	-
....TETRAEDRON	*	0	--	-
...SCENEDESMACEAE				
....CRUCIGENIA	2400	2	210	2
....SCENEDESMUS	41000#	38	--	-
....TETRASTRUM	1900	2	--	-
..TETRASPORALES				
...PALMELLACEAE				
....SPHAEROCYSTIS	720	1	--	-
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	--	-	*	0
CHRYSOPHYTA				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	8100	8	*	0
....MELOSIRA	3800	4	52	1
..PENNALES				
...NITZSCHIACEAE				
....NITZSCHIA	720	1	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....AGMENELLUM	12000	12	--	-
....ANACYSTIS	24000#	22	190	2
..HORMOGONALES				
...OSCILLATORIACEAE				
....OSCILLATORIA	--	-	9300#	94
EUGLENOPHYTA (EUGLENOIDS)				
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....EUGLENA	--	-	*	0
....TRACHELOMONAS	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	NOV 27,79		MAR 26,80		MAY 13,80		JUN 18,80	
TIME	1500		1030		1330		0930	
TOTAL CELLS/ML	4400		610		810		590	
DIVERSITY: DIVISION	1.4		1.1		0.9		1.8	
.CLASS	1.4		1.1		0.9		1.8	
..ORDER	2.0		1.9		1.0		2.6	
...FAMILY	2.5		2.9		1.7		3.2	
....GENUS	2.7		3.4		1.9		3.6	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	13	2
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	13	2
....MICRACTINIUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	360	8	45	7	13	2	39	7
....CHLORELLA	230	5	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	13	2
....SELENASTRUM	--	-	--	-	--	-	26	4
...SCENEDESMACEAE								
....CRUCIGENIA	--	-	--	-	--	-	100#	17
....SCENEDESMUS	--	-	--	-	26	3	--	-
..TETRASPORALES								
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	--	-	--	-	52	9
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	32	1	20	3	--	-	39	7
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	1500*	33	160#	26	13	2	65	11
....MELOSIRA	--	-	45	7	--	-	26	4
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	65	1	10	2	--	-	13	2
....COCCONEIS	32	1	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	13	2	--	-
...CYMBELLACEAE								
....CYMBELLA	32	1	5	1	--	-	--	-
...EUNOTIACEAE								
....EUNOTIA	--	-	10	2	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	81	13	--	-	--	-
....FRAGILARIA	--	-	--	-	520#	63	--	-
....SYNEDRA	32	1	35	6	26	3	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	32	1	10	2	26	3	--	-
...NAVICULACEAE								
....NAVICULA	390	9	81	13	26	3	--	-
....STAURONEIS	--	-	5	1	--	-	--	-
...NITZSCHIACEAE								
....NITZSCHIA	490	11	30	5	26	3	39	7
...SURIRELLACEAE								
....SURIRELLA	32	1	5	1	--	-	--	-
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...OCHROMONADACEAE								
....DINOBRYON	--	-	--	-	--	-	--	-
....OCHROMONAS	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	--	-

CONTINUED ...

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	NOV 27,79		MAR 26,80		MAY 13,80		JUN 18,80	
TIME	1500		1030		1330		0930	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	--	-	--	-	130#	16	100#	17
....GOMPHOSPHAERIA	--	-	--	*	--	-	--	-
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENOPSIS	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	40	7	--	-	--	-
....SCHIZOTHRIX	1200#	27	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	--	-	26	4
....TRACHELOMONAS	--	-	25	4	--	-	13	2
...PETALOMONADACEAE								
....CALYCOMONAS	32	1	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	--	-	13	2

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

	JUL 14,80	AUG 13,80	SEP 29,80
DATE	JUL 14,80	AUG 13,80	SEP 29,80
TIME	1045	1000	1130
TOTAL CELLS/ML	2300	4400	700
DIVERSITY: DIVISION	1.5	0.8	0.8
.CLASS	1.6	0.8	0.8
..ORDER	2.1	0.8	1.4
...FAMILY	3.0	1.0	2.1
....GENUS	3.3	1.7	2.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	--	-	--	-
...COELASTRACEAE						
....COELASTRUM	520#	23	--	-	--	-
...MICRACTINIACEAE						
....GOLENKINIA	--	-	--	-	--	-
....MICRACTINIUM	--	-	510	12	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	69	3	--	-	13	2
....CHLORELLA	--	-	--	-	--	-
....DICTYOSPHAERIUM	28	1	210	5	--	-
....KINCHNERIELLA	14	1	26	1	--	-
....OOCYSTIS	55	2	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-
...SCENEDESMACEAE						
....CRUCIGENIA	--	-	--	-	--	-
....SCENEDESMUS	550#	24	--	-	52	7
..TETRASPORALES						
...PALMELLACEAE						
....SPHAEROCYSTIS	--	-	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	41	2	*	0	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIUM	14	1	--	-	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	120	5	26	1	26	4
....MELOSIRA	83	4	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	--	-
....COCCONEIS	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	--	-
...CYMBELLACEAE						
....CYMBELLA	14	1	--	-	--	-
...EUNOTIACEAE						
....EUNOTIA	--	-	--	-	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	14	1	--	-	--	-
....FRAGILARIA	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	28	1	26	1	--	-
....STAURONEIS	--	-	--	-	--	-
...NITZSCHIACEAE						
....NITZSCHIA	110	5	39	1	--	-
...SURIRELLACEAE						
....SURIRELLA	--	-	--	-	--	-
.CHRYSOPHYCEAE						
..CHRYSOMONADALES						
...OCHROMONADACEAE						
....DINOBRYON	14	1	--	-	--	-
....OCHROMONAS	28	1	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOMONADACEAF						
....CRYPTOMONAS	14	1	--	-	--	-

CONTINUED ...

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	JUL 14,80		AUG 13,80		SEP 29,80	
TIME	1045		1000		1130	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	340#	15	820#	19	100	15
....GOMPHOSPHAERIA	--	-	2700#	62	--	-
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENOPSIS	--	-	--	-	310#	44
...OSCILLATORIACEAE						
....OSCILLATORIA	170	7	--	-	180#	26
....SCHIZOTHRIX	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	13	2
....TRACHELOMONAS	28	1	--	-	--	-
...PETALOMONADACEAE						
....CALYCOMONAS	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD

LOCATION.--Lat 39°18'07", long 79°18'26", Garrett County, Hydrologic Unit 02070002, on left bank 0.3 mi (0.5 km) southeast of Steyer, 0.4 mi (0.6 km) downstream from Steyer Run, 2.0 mi (3.2 km) northeast of Gorman, and at mile 81.8 (131.6 km).

DRAINAGE AREA.--73.0 mi² (189.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,276.01 ft (693.728 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except those for winter periods, which are poor. Several observations of ater temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 174 ft³/s (4.928 m³/s), 32.37 in/yr (822 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6 900 ft³/s (195 m³/s) July 3, 1978, gage height, 10.30 ft (3.139 m), from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of slope-area measurement of peak flow; minimum, 2.9 ft³/s (0.082 m³/s) Sept. 10, 1965, gage height, 2.03 ft (0.619 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 15, 1954, reached a stage of 13.0 ft (3.96 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 22	0500	Unknown		*a6.64	2.024	Aug. 18	Unknown	*Unknown		Unknown	

a Ice jam.

Minimum discharge, 20 ft³/s (0.57 m³/s) Sept. 29, gage height, 2.26 ft (0.689 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	90	86	123	66	150	530	591	140	58	120	55
2	77	389	81	118	64	120	357	394	164	48	170	57
3	185	350	81	123	62	170	280	298	459	120	110	72
4	115	220	81	98	66	180	376	238	467	98	90	58
5	297	177	86	98	62	240	301	201	245	73	95	168
6	314	156	98	97	60	500	246	177	284	143	70	74
7	221	153	115	96	56	400	214	166	234	75	60	58
8	196	139	90	94	54	450	194	142	383	444	52	50
9	1040	126	81	90	50	480	1110	127	257	317	60	44
10	1210	174	81	80	50	420	469	114	435	206	110	43
11	772	165	79	120	50	380	326	107	274	155	78	37
12	704	153	79	260	47	330	264	101	213	390	110	33
13	784	160	260	160	42	300	248	181	175	475	80	31
14	510	155	242	210	44	270	483	128	145	214	64	26
15	355	145	174	241	43	240	445	105	198	147	100	32
16	280	160	150	202	50	280	364	92	1140	113	220	29
17	270	128	140	183	70	330	311	83	473	133	100	29
18	260	115	125	185	62	809	281	117	291	117	1300	33
19	230	105	115	189	54	460	237	100	216	91	640	28
20	200	95	105	160	58	347	210	164	175	72	420	24
21	175	95	98	141	100	396	185	775	143	65	340	28
22	150	88	93	130	180	351	158	343	123	95	270	25
23	120	84	93	133	560	290	134	239	103	130	210	64
24	105	81	95	100	500	279	127	244	83	90	180	49
25	92	81	570	120	400	276	131	347	70	72	150	30
26	89	145	296	141	340	229	140	214	64	54	120	30
27	80	126	220	115	300	197	404	167	56	50	94	28
28	141	100	187	96	230	199	337	147	63	52	82	22
29	148	98	165	85	200	381	251	124	58	300	67	20
30	109	90	153	65	---	256	946	105	97	130	58	26
31	101	---	136	75	---	650	---	125	---	80	54	---
TOTAL	9397	4343	4455	4128	3920	10360	10059	6456	7228	4607	5674	1303
MEAN	303	145	144	133	135	334	335	208	241	149	183	43.4
MAX	1210	389	570	260	560	809	1110	775	1140	475	1300	168
MIN	67	81	79	65	42	120	127	83	56	48	52	20
CFSM	4.15	1.99	1.97	1.82	1.85	4.58	4.59	2.85	3.30	2.04	2.51	.60
IN.	4.79	2.21	2.27	2.10	2.00	5.28	5.13	3.29	3.68	2.35	2.89	.66

CAL YR 1979 TOTAL 75929 MEAN 208 MAX 1890 MIN 15 CFSM 2.85 IN 38.69
WTR YR 1980 TOTAL 71930 MEAN 197 MAX 1300 MIN 20 CFSM 2.70 IN 36.65

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT , 1979 23...	1300	91	520	3.9	10.0	12.5	9.5	190	190
NOV 16...	0830	151	285	4.4	2.0	3.5	12.2	120	120
DEC 14...	1400	229	210	5.4	.0	3.0	12.5	80	80
JAN , 1980 18...	0915	162	240	5.3	3.0	3.0	13.0	88	86
FEB 15...	1000	148	750	6.4	3.5	.5	--	400	390
APR 09...	1800	755	140	5.1	11.0	11.0	9.3	80	78
MAY 07...	1400	171	285	4.1	23.0	14.0	9.9	120	120
JUN 11...	1430	270	244	5.7	16.0	13.5	9.9	100	100
AUG 27...	1230	103	380	4.5	23.0	19.0	8.7	180	180
SEP 09...	1645	41	--	6.4	23.0	19.4	8.8	--	--

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
OCT , 1979 23...	1.1	55	61	8.2	2.6	4	.1	1.4	0
NOV 16...	.2	10	39	4.6	1.9	4	.1	1.1	0
DEC 14...	.4	20	26	3.6	2.0	6	.1	1.0	0
JAN , 1980 18...	.4	20	28	4.3	2.6	6	.1	.9	2
FEB 15...	.0	.0	140	11	5.3	3	.1	1.7	9
APR 09...	.2	10	27	3.1	1.7	4	.1	.8	2
MAY 07...	.3	15	37	5.8	2.7	5	.1	1.0	1
JUN 11...	.1	5.0	36	3.3	2.5	5	.1	.8	1
AUG 27...	.2	10	61	6.4	2.8	3	.1	1.3	2
SEP 09...	--	--	--	--	--	--	--	--	--

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT , 1979 23...	200	2.4	.2	7.7	334	289	.45	82.1
NOV 16...	120	2.8	.1	5.5	180	178	.24	73.4
DEC 14...	78	2.7	.1	4.9	135	122	.18	83.5
JAN , 1980 18...	86	3.6	.1	5.3	135	140	.18	59.0
FEB 15...	370	4.7	.2	6.1	558	547	.76	223
APR 09...	81	1.9	.1	4.0	151	125	.21	308
MAY 07...	120	2.5	.1	5.4	205	179	.28	94.6
JUN 11...	97	2.5	.1	4.8	180	151	.24	131
AUG 27...	180	2.7	.2	7.7	283	266	.38	78.7
SEP 09...	430	--	--	--	683	--	.93	76.9

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT , 1979						
23...	4900	3600	1300	710	30	680
NOV						
16...	3400	3080	320	470	0	470
DEC						
14...	2100	1500	610	390	10	380
JAN , 1980						
18...	10000	6800	3200	410	10	400
FEB						
15...	3100	2900	250	630	30	600
APR						
09...	4100	3100	1000	350	40	310
MAY						
07...	2200	1400	830	420	0	420
JUN						
11...	1600	1200	400	250	30	220
AUG						
27...	980	770	130	440	0	460
SEP						
09...	350	340	10	390	0	400

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	COAL IN BOTTOM MATE-RIAL (GM/KG)
OCT , 1979				
23...	18	4.4	93	--
NOV				
16...	30	12	--	--
DEC				
14...	25	15	--	--
JAN , 1980				
18...	249	109	--	--
FEB				
15...	27	11	--	--
JUN				
11...	18	13	--	--
AUG				
27...	10	2.8	--	--
SEP				
09...	--	--	--	12.0

01595200 STONY RIVER NEAR MT. STORM, WV

LOCATION.--Lat 39°16'10", long 79°15'45", Grant County, Hydrologic Unit 02070002, on left bank 100 ft (30 m) downstream from highway bridge on U.S. Highway 50, 1.0 mi (1.6 km) west of Mt. Storm, and at mile 6.4 (10.3 km).

DRAINAGE AREA.--48.8 mi^2 (126.4 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,554.54 ft (778.624 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except those for January and February, which are poor. Flow regulated by Stony River Reservoir, 14.0 mi (22.5 km) upstream from station, capacity, 1,948,000,000 gal (7.373 hm^3), of which 1,681,000,000 gal (6.363 hm^3) is controlled above minimum pool. Since 1963, minor regulation by Virginia Electric and Power Company dam 4.0 mi (6.4 km) upstream from station.

AVERAGE DISCHARGE.--19 years, 99.4 ft^3/s (2.815 m^3/s), 27.66 in/yr (703 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,340 ft^3/s (151 m^3/s) July 3, 1978, from rating curve extended above 2,500 ft^3/s (71 m^3/s); gage height, 10.34 ft (3.152 m); minimum, 1.8 ft^3/s (0.051 m^3/s) July 13, 1968; minimum daily, 1.9 ft^3/s (0.054 m^3/s) July 13, 1968; minimum gage height, 1.79 ft (0.546 m), sometime during period Oct. 3-23, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,020 ft^3/s (57.2 m^3/s) Feb. 24, gage height, 7.09 ft (2.161 m); minimum, 5.7 ft^3/s (0.161 m^3/s), Sept. 19, 21, 30, gage height, 2.00 ft (0.610 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	31	37	82	16	45	319	695	98	23	69	10
2	220	164	37	33	16	40	283	545	102	21	57	10
3	262	132	35	31	16	36	308	253	148	34	45	11
4	160	112	33	32	16	34	223	99	215	27	58	11
5	182	105	32	31	18	102	182	122	192	24	55	16
6	168	98	35	33	18	136	164	142	217	27	44	12
7	144	134	40	40	17	122	142	202	205	22	24	10
8	140	128	36	40	17	215	120	200	232	347	12	9.6
9	422	114	33	37	17	308	367	138	200	379	16	9.1
10	1010	118	32	55	17	268	256	99	226	280	16	8.6
11	761	105	32	98	17	148	217	81	175	223	14	7.9
12	391	101	35	107	17	107	200	35	150	134	15	7.2
13	417	101	71	87	20	112	195	42	116	84	12	7.2
14	359	95	73	105	20	122	274	35	38	40	11	7.2
15	335	91	67	107	17	379	253	31	78	29	30	7.2
16	304	91	77	104	28	440	215	28	467	24	40	7.0
17	271	81	84	105	28	187	192	29	150	23	15	6.8
18	241	76	77	114	24	274	168	107	192	21	462	6.4
19	212	68	72	229	19	343	148	43	200	18	395	6.2
20	182	64	67	154	22	565	132	81	170	17	327	6.0
21	162	31	64	34	58	417	99	535	144	16	259	6.0
22	136	20	60	34	226	217	124	440	120	17	212	6.2
23	41	19	61	37	200	126	105	408	49	23	122	12
24	37	21	66	33	1060	144	74	343	27	18	96	9.1
25	34	23	235	53	80	202	68	217	25	16	80	7.7
26	32	44	166	53	64	164	80	55	24	14	67	7.5
27	30	40	185	651	55	152	212	45	21	15	16	6.8
28	40	38	166	34	52	244	323	43	20	45	14	6.4
29	37	40	148	22	50	391	290	42	20	76	13	6.0
30	32	40	132	17	---	280	601	52	35	40	12	5.9
31	30	---	120	16	---	383	---	98	---	27	11	---
TOTAL	6890	2325	2408	2608	2225	6703	6334	5285	4056	2104	2619	250.0
MEAN	222	77.5	77.7	84.1	76.7	216	211	170	135	67.9	84.5	8.33
MAX	1010	164	235	651	1060	565	601	695	467	379	462	16
MIN	30	19	32	16	16	34	68	28	20	14	11	5.9
(≠)	1208	1175	1175	1138	1274	1230	1405	1418	1375	1418	1357	1297

CAL YR 1979 TOTAL 48559.0 MEAN 133 MAX 1300 MIN 12 CFSM 2.73 IN 37.02
WTR YR 1980 TOTAL 43807.0 MEAN 120 MAX 1060 MIN 5.9 CFSM 2.46 IN 33.39

≠ Month-end contents, in millions of gallons, in Stony River Reservoir, furnished by West Virginia Pulp and Paper Co.

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1961 to March 1974, September 1974 to current year.

INSTRUMENTATION.--Temperature recorder since December 1961.

REMARKS.--Temperature recorder pen did not ink Nov. 3-7, Dec. 7-11.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 27°C July 1, Aug. 22, 23, 1968; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 25.5°C July 11; minimum, 2.0°C on many days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
NOV , 1979 16...	1000	85	200	5.3	2.5	7.0	11.1	56	56	.8	40	16
FEB , 1980 14...	1600	21	440	4.6	20.0	.5	--	150	150	.9	45	43
APR 08...	1700	81	184	4.6	12.0	11.5	9.6	61	59	.3	15	18
MAY 06...	1030	122	173	4.8	19.0	17.0	8.5	53	53	.4	20	15
JUN 11...	1300	154	150	4.1	16.0	18.5	8.6	42	42	.4	28	12
AUG 27...	1400	21	326	3.9	24.0	22.5	7.8	120	120	.5	25	35
SEP 09...	1400	14	--	2.8	22.5	18.8	8.5	--	--	1.5	75	--

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
NOV , 1979 16...	3.9	3.2	14	.2	1.0	0	70	1.6	.1	4.3	108	107
FEB , 1980 14...	11	7.9	10	.3	1.5	0	200	4.8	.3	5.7	290	286
APR 08...	4.0	3.2	10	.2	1.0	2	65	1.7	.1	3.9	119	104
MAY 06...	3.7	1.9	7	.1	1.0	0	66	1.5	.1	3.8	118	100
JUN 11...	2.8	2.9	13	.2	.8	0	55	1.3	.1	3.7	88	84
AUG 27...	9.0	4.4	7	.2	1.6	2	140	2.2	.2	6.1	228	206
SEP 09...	--	--	--	--	--	--	320	--	--	--	490	--

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979 16...	.15	24.9	5600	1300	4300	790	30	760	15	3.5	--
FEB , 1980 14...	.39	16.4	8500	900	7600	1400	0	1500	12	.68	--
APR 08...	.16	26.2	3900	800	3100	680	0	710	10	2.2	--
MAY 06...	.16	30.9	5100	1400	3700	630	0	630	--	--	--
JUN 11...	.12	36.6	3500	700	2800	700	0	700	12	5.0	--
AUG 27...	.31	13.0	4100	1200	2900	1000	0	1100	12	.68	--
SEP 09...	.67	18.9	4500	2600	1900	2000	0	2000	--	--	10.0

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.0	21.5	11.5	10.0	6.0	5.0	7.0	5.5	3.0	3.0	2.5	2.5
2	21.5	17.0	11.5	11.0	5.5	5.0	5.5	4.0	3.0	3.0	3.0	2.5
3	17.5	17.0	---	---	5.0	5.0	4.0	3.5	3.0	2.5	3.5	2.5
4	19.0	17.5	---	---	5.0	4.0	4.0	3.0	2.5	2.5	2.5	2.0
5	19.5	15.5	---	---	4.0	4.0	3.0	3.0	2.5	2.0	3.0	2.0
6	15.5	15.0	---	---	6.0	4.0	3.0	3.0	3.0	2.0	3.0	2.0
7	16.0	15.5	---	---	6.0	---	3.5	3.0	2.0	2.0	6.0	3.0
8	15.5	15.0	12.0	11.0	---	---	3.0	2.5	2.0	2.0	7.5	5.5
9	15.5	14.5	12.5	12.0	---	---	3.0	2.5	2.0	2.0	7.0	6.5
10	17.5	14.5	12.5	12.5	---	---	5.0	3.0	2.0	2.0	7.5	7.0
11	17.5	16.5	12.5	12.0	5.5	---	6.5	5.0	2.0	2.0	7.0	3.5
12	16.5	16.5	12.0	11.0	8.0	5.5	6.0	3.5	2.0	2.0	4.0	2.5
13	16.5	16.0	12.0	11.0	8.5	8.0	4.0	3.5	2.0	2.0	4.0	2.0
14	16.5	16.0	12.0	10.5	8.0	5.5	5.5	4.0	2.0	2.0	3.5	3.0
15	16.5	16.0	11.5	10.5	5.5	5.0	6.0	5.5	2.0	2.0	7.0	3.5
16	17.0	16.5	10.0	10.0	8.0	5.0	7.0	6.0	2.0	2.0	7.0	5.0
17	18.0	17.0	10.0	9.5	8.0	4.0	7.5	7.0	2.0	2.0	5.0	4.0
18	18.0	17.0	10.0	10.0	4.0	4.5	8.0	7.5	2.0	2.0	4.5	4.0
19	19.0	18.0	10.0	9.5	6.0	4.5	9.0	6.5	2.0	2.0	6.0	4.0
20	19.5	18.5	11.0	10.0	6.0	6.0	9.0	5.0	2.0	2.0	6.5	6.0
21	20.0	19.0	11.0	10.0	6.5	6.0	5.0	3.5	2.0	2.0	6.5	5.5
22	20.0	19.0	10.5	10.0	7.0	6.0	4.0	3.0	2.0	2.0	6.0	4.0
23	19.0	13.0	10.5	9.0	8.5	7.0	4.0	3.0	4.0	2.0	6.0	3.0
24	13.0	10.0	11.0	10.0	9.5	8.5	3.0	2.5	7.0	4.0	6.5	5.5
25	10.0	9.5	12.0	11.0	9.0	7.5	2.5	2.0	6.0	5.0	7.0	6.5
26	9.5	8.5	12.0	12.0	7.5	7.5	2.0	2.0	5.0	3.5	8.5	6.5
27	8.5	7.0	12.0	9.0	8.0	7.5	7.0	2.0	3.5	3.0	9.5	6.5
28	10.0	8.0	9.0	9.0	8.0	7.5	7.0	4.0	3.0	2.5	8.5	7.5
29	11.0	10.5	9.0	7.0	7.5	7.0	4.0	3.0	2.5	2.5	8.0	7.0
30	10.0	8.0	7.0	6.0	7.0	6.5	3.0	3.0	---	---	10.0	8.0
31	13.5	8.5	---	---	7.0	6.0	3.0	3.0	---	---	10.0	9.0
MONTH	22.0	7.0	12.5	6.0	9.5	4.0	9.0	2.0	7.0	2.0	10.0	2.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.5	9.5	12.5	10.5	21.0	19.0	21.0	20.0	21.5	20.0	22.0	20.0
2	11.0	9.5	14.0	12.5	21.0	19.5	22.5	18.5	21.0	20.0	22.0	20.0
3	12.0	10.5	14.5	13.5	20.5	19.0	22.0	21.0	21.5	21.5	22.0	21.5
4	11.5	9.5	15.5	11.5	20.0	19.0	21.5	19.5	22.5	21.5	21.0	19.0
5	11.0	9.0	16.5	12.5	20.5	18.0	21.5	20.5	22.5	22.5	21.0	19.5
6	12.0	9.5	16.5	14.5	20.0	19.5	22.5	20.5	22.5	22.5	21.5	19.5
7	12.0	10.0	17.0	14.5	21.5	19.5	21.5	17.5	23.5	21.5	21.0	19.0
8	12.0	12.0	15.5	14.0	21.0	18.5	21.5	18.0	23.5	21.5	20.5	19.0
9	12.0	11.0	14.5	13.5	19.5	18.0	23.5	21.5	24.0	23.0	19.5	17.0
10	11.0	11.0	16.0	11.0	18.5	17.5	23.5	23.5	23.0	22.0	20.0	18.0
11	13.0	11.0	16.0	14.0	19.0	17.0	25.5	23.5	24.0	22.0	14.0	15.0
12	13.0	12.5	17.0	15.0	20.0	17.0	25.0	19.5	23.0	21.5	18.0	15.0
13	13.0	12.0	18.0	15.5	20.5	17.0	20.0	18.0	22.0	19.0	19.0	16.0
14	12.0	11.0	16.0	14.0	19.0	16.0	21.0	17.0	23.0	18.5	20.0	17.0
15	11.0	11.0	16.0	12.0	19.0	17.5	21.0	18.0	22.5	21.0	19.0	18.0
16	11.0	10.5	16.0	12.0	18.0	16.0	24.0	20.0	21.0	19.0	19.0	17.0
17	12.0	9.5	15.0	13.0	17.5	14.5	23.5	21.0	19.0	18.0	19.0	17.0
18	13.5	10.5	17.0	13.0	20.5	16.5	22.0	19.5	21.0	17.0	19.0	17.5
19	13.5	10.5	17.0	15.5	21.5	19.5	23.0	19.0	23.0	21.0	19.0	16.0
20	14.5	10.5	16.0	15.0	22.0	20.0	24.5	21.0	24.0	23.0	18.5	15.5
21	14.5	12.0	16.0	14.0	21.5	20.0	24.5	21.0	24.0	24.0	20.0	17.0
22	13.0	11.0	19.0	16.0	22.5	19.0	23.5	21.5	24.0	24.0	21.0	19.0
23	15.5	12.5	19.0	16.5	22.0	19.0	21.0	19.5	24.0	22.5	20.0	18.0
24	14.5	12.0	19.5	16.5	20.5	19.0	20.5	18.5	24.5	22.0	18.0	17.0
25	13.0	11.5	19.0	17.5	18.5	17.5	21.0	17.0	24.0	22.0	18.0	17.0
26	12.5	10.5	17.5	14.0	21.0	17.0	21.5	17.5	23.0	21.5	18.0	15.0
27	10.5	10.5	16.0	13.0	21.5	18.5	22.0	18.5	22.5	19.5	15.0	12.0
28	12.0	10.5	17.5	13.5	22.5	20.0	21.5	20.0	21.5	19.0	14.0	12.0
29	12.5	12.0	19.0	15.0	22.0	21.0	20.0	20.0	21.5	19.0	15.0	12.0
30	12.0	10.5	19.0	16.5	22.0	19.0	20.5	20.0	21.0	19.5	14.0	13.0
31	---	---	20.0	18.0	---	---	21.5	20.5	22.0	20.0	---	---
MONTH	15.5	9.0	20.0	10.5	22.5	14.5	25.5	17.0	24.5	17.0	22.0	12.0

01595300 ABRAM CREEK AT OAKMONT, WV

LOCATION.--Lat 39°22'00", long 79°10'45", Mineral County, Hydrologic Unit 02070002, on downstream side of right wingwall of highway bridge, 0.5 mi (0.8 km) east of Oakmont, 1.2 mi (1.9 km) downstream from Emory Run, 1.8 mi (2.9 km) southwest of Elk Garden, and at mile 1.9 (3.1 km).

DRAINAGE AREA.--42.6 mi^2 (110.3 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1956 to current year.

REVISED RECORDS.--WDR WV-78-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,840 ft (560.8 m), from topographic map.

REMARKS.--Water-discharge records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--24 years, 68.1 ft^3/s (1.929 m^3/s), 21.71 in/yr (551 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,310 ft^3/s (65.4 m^3/s) July 3, 1978, gage height, 8.17 ft (2.490 m), from rating curve extended above 1,200 ft^3/s (34 m^3/s) on basis of contracted-opening measurement at gage height 9.82 ft (2.993 m); minimum, 0.2 ft^3/s (0.006 m^3/s) Sept. 13-19, 1959, Sept. 14-18, 1964; minimum gage height, 1.48 ft (0.451 m) Sept. 16, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 18, 1955, reached a stage of 9.82 ft (2.993 m), from floodmarks, discharge, 3,830 ft^3/s (108 m^3/s), from rating curve extended above 1,200 ft^3/s (34 m^3/s) on basis of contracted-opening measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft^3/s (20 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 9	0415	805	22.8	5.79	1.765
Apr. 30	1145	1020	28.9	6.21	1.893
May 21	0445	885	25.1	5.95	1.814
June 16	0515	880	24.9	5.94	1.811
Aug. 18	0830	*1280	36.2	6.67	2.033

Minimum discharge, 7.7 ft^3/s (0.218 m^3/s) Sept. 29, 30, gage height, 2.37 ft (0.722 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	34	37	52	30	51	250	372	77	22	44	18
2	46	213	36	47	28	49	183	247	82	20	46	17
3	140	187	34	43	27	46	149	185	113	45	25	18
4	72	112	33	40	25	45	171	146	132	31	20	33
5	184	85	32	38	27	127	142	119	74	23	22	53
6	176	75	37	36	27	181	112	102	78	22	17	25
7	124	73	35	40	25	124	95	91	75	17	16	19
8	108	67	31	37	23	156	87	75	134	171	14	16
9	372	61	27	34	22	136	447	66	88	120	18	15
10	501	71	27	30	21	102	213	58	162	57	20	14
11	309	62	27	65	20	89	160	54	105	43	22	13
12	274	61	27	102	19	70	136	52	78	70	21	12
13	244	62	65	58	18	64	127	78	67	115	16	11
14	180	58	67	95	20	60	245	54	59	52	14	11
15	147	52	47	100	25	65	228	46	88	38	22	13
16	122	55	44	79	40	83	173	40	539	30	55	12
17	102	51	40	75	31	282	148	37	219	30	21	10
18	87	46	38	75	27	369	125	60	144	28	527	10
19	76	43	36	76	25	217	105	48	119	22	206	9.8
20	69	41	35	64	38	173	91	67	89	19	113	9.2
21	62	38	34	56	146	231	81	503	72	17	78	9.8
22	56	37	33	52	360	199	70	219	60	25	66	10
23	54	36	38	48	260	154	64	156	52	34	54	18
24	54	36	41	41	191	137	61	160	46	26	45	16
25	48	37	226	61	139	129	66	193	41	18	38	12
26	45	59	119	52	112	103	67	124	36	16	32	11
27	40	55	87	45	88	85	272	89	32	15	29	9.8
28	47	45	74	40	78	119	213	76	30	18	26	8.3
29	47	42	66	36	64	310	162	66	27	112	24	7.7
30	39	38	63	34	---	183	710	63	30	33	21	7.7
31	36	---	56	32	---	307	---	81	---	23	20	---
TOTAL	3896	1932	1592	1683	1956	4446	5153	3727	2948	1312	1692	449.3
MEAN	126	64.4	51.4	54.3	67.4	143	172	120	98.3	42.3	54.6	15.0
MAX	501	213	226	102	360	369	710	503	539	171	527	53
MIN	35	34	27	30	18	45	61	37	27	15	14	7.7
CFSM	2.66	1.36	1.09	1.15	1.43	3.02	3.64	2.54	2.08	.89	1.15	.32
IN.	3.06	1.52	1.25	1.32	1.54	3.50	4.05	2.93	2.32	1.03	1.33	.35

CAL YR 1979 TOTAL 32879.4 MEAN 90.1 MAX 813 MIN 9.4 CFSM 1.91 IN 25.86
WTR YR 1980 TOTAL 30786.3 MEAN 84.1 MAX 710 MIN 7.7 CFSM 1.78 IN 24.21

01595300 ABRAM CREEK AT OAKMONT, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1965, 1969-71, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
NOV , 1979												
16...	1115	59	320	4.6	6.0	3.5	13.0	110	100	.0	.0	29
FEB , 1980												
14...	1445	20	435	5.1	3.0	1.0	--	170	160	.5	25	45
APR												
08...	1400	81	271	4.7	13.0	9.0	10.6	96	94	.3	15	25
MAY												
06...	1730	109	296	4.1	23.5	15.5	8.9	100	100	.5	25	26
JUN												
11...	1145	112	254	4.7	16.0	12.0	10.4	92	92	.2	10	24
AUG												
27...	1500	33	406	4.0	29.0	21.1	8.3	170	170	.5	25	43
SEP												
09...	1015	16	--	4.0	18.5	16.9	9.1	--	--	.5	23	--

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV , 1979											
16...	9.3	5.0	13	.2	1.2	9	120	4.1	.2	6.3	198
FEB , 1980											
14...	13	4.9	6	.2	1.2	2	190	5.2	.3	6.6	276
APR											
08...	8.2	3.7	8	.2	1.2	2	110	4.7	.2	5.3	180
MAY											
06...	9.2	4.4	8	.2	1.1	1	120	3.7	.2	5.9	222
JUN											
11...	7.7	5.1	11	.2	1.1	0	97	3.5	.1	5.8	182
AUG											
27...	14	5.8	7	.2	1.5	0	180	3.7	.3	8.4	286
SEP											
09...	--	--	--	--	--	--	210	--	--	--	359

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV , 1979											
16...	185	.27	31.5	780	560	200	1900	0	1900	10	1.6
FEB , 1980											
14...	273	.38	14.9	390	300	90	2800	0	3000	5	.27
APR											
08...	163	.24	39.4	650	450	200	1600	0	1600	6	1.3
MAY											
06...	177	.30	65.3	660	380	280	1800	0	1800	--	--
JUN											
11...	148	.25	55.0	930	790	140	1500	100	1400	17	5.1
AUG											
27...	262	.39	25.9	270	170	100	2900	0	3200	3	.27
SEP											
09...	--	.49	16.0	170	110	60	4100	0	4100	--	--

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD

LOCATION.--Lat 39°23'38", long 79°10'55", Garrett County, Hydrologic Unit 02070002, on left bank 0.6 mi (1.0 km) downstream from bridge on State Highway 38 in Kitzmiller, 1.5 mi (2.4 km) downstream from Wolfden Run, and at mile 68.9 (110.9 km).

DRAINAGE AREA.--225 mi² (583 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,572.26 ft (479.225 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 15, 1954, at site 0.3 mi (0.5 km) upstream at datum 7.58 ft (2.310 m) higher. Oct. 15, 1954, to Nov. 20, 1955, nonrecording gage at bridge 0.5 mi (0.8 km) upstream at datum 21.51 ft (6.556 m) higher.

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Regulation at low flow by Stony River Reservoir, 30 mi (48 km) above station (see station 01595200). Gage-height telemeter at station.

AVERAGE DISCHARGE.--31 years, 452 ft³/s (12.80 m³/s), 27.28 in/yr (693 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft³/s (946 m³/s) Oct. 15, 1954, gage height, 13.73 ft (4.185 m), from floodmarks, present site and datum; minimum, 4.6 ft³/s (0.13 m³/s) Oct. 3-7, 1953, gage height, 1.45 ft (0.442 m), site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft³/s (96 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 10	0215	3940	112	7.02	2.140	May 21	0545	4280	121	7.18	2.188
Apr. 9	0430	4930	140	7.47	2.277	June 16	0730	4500	127	7.28	2.219
Apr. 30	1200	4520	128	7.29	2.222	Aug. 18	0900	*9280	263	8.89	2.710

Minimum discharge, 47 ft³/s (1.33 m³/s) Sept. 30, gage height, 2.49 ft (0.759 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	249	159	199	316	136	300	1560	2100	456	153	390	111
2	276	871	195	248	131	250	1110	1470	432	126	458	107
3	830	1080	180	217	131	350	986	1030	797	221	259	128
4	518	697	182	230	137	270	1020	674	1100	221	235	126
5	735	539	179	216	127	500	860	597	669	152	261	308
6	910	467	206	210	123	1210	716	557	703	220	198	155
7	657	445	238	209	116	844	617	580	684	153	161	118
8	598	400	203	203	111	1150	552	550	947	963	128	103
9	2170	371	175	195	104	1200	3300	453	749	1050	157	90
10	3620	440	173	178	103	965	1320	359	1000	678	294	86
11	2520	425	169	254	102	846	983	318	889	521	213	81
12	1790	387	168	558	95	643	820	272	616	606	306	72
13	1830	389	434	366	88	586	766	422	503	982	207	69
14	1340	360	519	430	91	560	1350	324	356	411	157	63
15	1060	327	363	510	91	527	1360	259	580	278	267	71
16	882	349	332	457	105	886	1060	225	3300	215	723	65
17	745	323	332	438	146	1060	916	205	1180	216	284	61
18	650	292	292	438	124	1050	806	361	811	216	4220	62
19	579	264	288	502	112	1270	685	286	705	168	1960	61
20	502	246	285	618	120	1300	597	344	579	141	1200	56
21	442	222	234	295	211	1330	520	2460	477	128	874	55
22	387	192	222	275	510	1120	469	1280	393	156	700	61
23	309	178	228	271	1100	886	423	1010	300	334	534	95
24	261	174	234	210	800	847	363	999	210	237	412	112
25	229	180	871	258	620	850	368	1190	189	165	328	72
26	205	276	646	246	520	743	353	622	167	139	278	64
27	179	298	554	514	430	595	1130	467	152	126	199	62
28	237	239	490	252	400	637	1140	392	149	141	159	54
29	306	227	433	173	390	1460	952	332	139	787	139	49
30	213	211	395	137	---	968	2960	293	188	302	126	48
31	182	---	354	152	---	1810	---	387	---	214	115	---
TOTAL	25411	11028	9773	9568	7274	27813	30062	20818	19420	10412	15942	2665
MEAN	820	368	315	309	251	897	1002	672	647	336	514	88.8
MAX	3620	1080	871	618	1100	1850	3300	2460	3300	1050	4220	308
MIN	179	159	168	137	88	250	353	205	139	126	115	48

CAL YR 1979 TOTAL 211404 MEAN 579 MAX 5130 MIN 48 CFSM 2.57 IN 34.95
WTR YR 1980 TOTAL 190186 MEAN 520 MAX 4220 MIN 48 CFSM 2.31 IN 31.44

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1961 to current year.
SUSPENDED-SEDIMENT DISCHARGE: February to September 1980.

INSTRUMENTATION.--Temperature recorder since August 1961.

REMARKS.--Period of missing record, Dec. 17 to Mar. 31, due to construction of new installation; Apr. 1 to July 22 and Aug. 8 to Sept. 30, due to equipment malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 32.0°C Aug. 15, 16, 18, 1965; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV									
16...	1200	431	280	5.6	7.0	5.0	11.5	100	100
APR									
09...	1000	3879	130	5.5	16.5	9.0	12.9	--	--
SEP									
09...	1030	90	650	4.3	24.0	19.7	8.5	280	280

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
NOV									
16...	.0	.0	33	5.3	2.0	5	.1	1.0	0
APR									
09...	.1	5.0	--	--	--	--	--	--	1
SEP									
09...	.2	10	92	11	5.2	4	.1	2.0	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
NOV								
16...	110	2.4	.1	4.9	--	160	.22	186
APR								
09...	43	--	--	--	85	--	.12	890
SEP								
09...	280	3.1	.2	7.0	483	402	.66	117

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)
SEP , 1980										
09...	0	0	100	0	10	80	5	10	5	10

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV 16...	2800	1870	930	--	--	--	740	0	760
APR 09...	12000	12000	270	--	--	--	530	120	410
SEP 09...	370	280	90	11000	1	10	1200	0	1300

DATE	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	COAL IN BOTTOM MATE-RIAL (GM/KG)
NOV 16...	--	--	--	--	--	--	--	--	14	16	--
APR 09...	--	--	--	--	--	--	--	--	71	744	--
SEP 09...	130	.1	.00	0	0	0	100	20	--	--	3.00

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.5	16.0	9.0	6.5	.5	.5						
2	17.5	15.5	9.0	8.0	.5	.5						
3	15.5	13.0	8.0	6.5	.5	.0						
4	14.0	12.5	6.5	4.5	.0	.0						
5	14.0	11.5	5.5	4.5	.0	.0						
6	11.5	10.0	5.5	4.5	1.0	.0						
7	10.0	9.5	6.0	5.5	2.0	1.0						
8	9.5	8.5	6.0	5.0	1.5	.0						
9	10.5	9.5	7.0	5.5	.0	.0						
10	10.0	8.0	8.5	7.0	.0	.0						
11	10.5	9.5	8.0	6.5	1.5	.0						
12	9.5	9.0	6.0	5.0	3.0	1.0						
13	9.5	8.5	5.0	5.0	4.0	3.0						
14	9.5	8.0	5.0	3.5	4.0	1.0						
15	8.5	7.0	3.5	2.5	1.0	.0						
16	10.0	8.5	4.0	3.0	1.0	.0						
17	11.0	10.0	4.5	3.0	---	---						
18	11.0	10.5	5.5	4.0	---	---						
19	12.0	10.5	5.0	3.5	---	---						
20	13.0	11.5	6.0	4.0	---	---						
21	13.5	12.0	6.0	4.5	---	---						
22	13.5	12.0	7.0	5.5	---	---						
23	13.0	9.0	6.5	4.5	---	---						
24	10.0	6.5	7.5	6.5	---	---						
25	6.5	6.0	9.0	7.5	---	---						
26	6.0	5.0	9.5	7.5	---	---						
27	5.5	3.0	7.5	5.0	---	---						
28	7.0	4.5	5.0	3.5	---	---						
29	8.0	6.0	3.5	.5	---	---						
30	7.5	5.5	.5	.5	---	---						
31	7.0	5.5	---	---	---	---						
MONTH	17.5	3.0	9.5	.5	4.0	.0						

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1							---	---	25.5	21.0		
2							---	---	31.0	25.5		
3							---	---	30.5	27.0		
4							---	---	32.0	27.0		
5							---	---	31.0	27.0		
6							---	---	29.5	27.5		
7							---	---	29.0	23.0		
8							---	---	---	---		
9							---	---	---	---		
10							---	---	---	---		
11							---	---	---	---		
12							---	---	---	---		
13							---	---	---	---		
14							---	---	---	---		
15							---	---	---	---		
16							---	---	---	---		
17							---	---	---	---		
18							---	---	---	---		
19							---	---	---	---		
20							---	---	---	---		
21							---	---	---	---		
22							---	---	---	---		
23							22.0	20.0	---	---		
24							23.5	19.0	---	---		
25							25.0	18.5	---	---		
26							26.0	19.0	---	---		
27							26.5	20.0	---	---		
28							22.5	20.0	---	---		
29							21.0	18.5	---	---		
30							22.5	18.5	---	---		
31							23.5	19.5	---	---		
MONTH							26.5	18.5	32.0	21.0		

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1									---	---	6	4.9
2									---	---	5	3.4
3									---	---	26	24
4									---	---	14	10
5									---	---	22	30
6									---	---	55	199
7									---	---	22	50
8									---	---	64	215
9									---	---	31	104
10									---	---	15	40
11									---	---	14	32
12									---	---	13	23
13									---	---	14	22
14									14	3.4	15	25
15									21	5.2	14	22
16									25	7.1	62	172
17									12	4.7	120	475
18									10	3.3	146	762
19									10	3.0	33	115
20									15	4.9	22	77
21									32	20	46	171
22									230	328	29	88
23									76	226	20	48
24									35	76	15	34
25									21	35	15	34
26									16	22	12	24
27									11	13	10	16
28									9	9.7	42	82
29									8	8.4	80	304
30									---	---	35	92
31									---	---	120	747
TOTAL									---	769.7	---	4045.3

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	44	195	39	229	45	55	10	4.1	100	189	5	1.5
2	17	51	20	80	29	35	6	2.0	85	114	4	1.2
3	17	48	15	43	76	172	37	25	30	21	5	1.7
4	23	61	12	22	82	282	32	19	25	16	13	6.0
5	16	37	15	24	22	39	12	5.0	30	21	94	78
6	13	25	13	20	28	59	32	21	33	18	9	4.0
7	10	17	13	20	28	52	18	8.0	18	7.8	6	1.9
8	28	42	10	15	50	147	427	2050	10	3.5	6	1.7
9	284	3010	10	12	22	45	200	742	10	4.2	5	1.2
10	39	142	10	9.7	62	215	13	23	78	75	4	.93
11	18	48	9	7.7	22	53	90	129	46	27	3	.66
12	17	30	10	7.4	22	37	142	575	95	85	2	.39
13	15	31	29	34	22	30	234	981	30	17	2	.37
14	63	260	14	12	19	18	55	64	18	7.6	2	.34
15	30	113	9	6.3	37	65	21	16	59	111	2	.38
16	15	43	7	4.3	303	2730	6	4.0	188	492	2	.35
17	14	34	5	2.8	43	138	26	15	30	23	2	.33
18	13	28	16	15	29	64	24	14	1180	19100	2	.33
19	13	24	7	6.0	23	44	16	7.0	92	513	2	.33
20	12	19	36	51	16	25	13	4.9	39	128	2	.30
21	13	18	179	1460	11	14	11	3.8	21	50	2	.30
22	12	15	20	68	7	7.4	49	24	18	34	2	.33
23	11	13	16	42	5	4.1	148	124	14	20	26	9.0
24	12	12	39	139	4	2.3	30	20	12	13	8	3.0
25	13	13	46	151	6	3.1	14	6.0	9	8.0	3	.58
26	15	14	18	30	4	1.8	10	3.8	8	6.0	2	.35
27	79	277	14	18	5	2.1	10	3.4	8	4.3	1	.17
28	26	82	14	15	3	1.2	41	20	7	3.0	2	.29
29	17	43	14	13	9	3.4	208	561	6	2.3	2	.26
30	229	2170	14	11	14	7.1	28	23	8	2.7	1	.13
31	---	---	17	18	---	---	22	13	11	3.4	---	---
TOTAL	---	6920	---	2586.2	---	4351.5	---	5511.4	---	21119.8	---	116.32

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV

LOCATION.--Lat 39°26'44", long 79°06'39", Garrett County, Md., Hydrologic Unit 02070002, on left bank at highway bridge at Barnum, W. Va., 0.4 mi (0.6 km) upstream from Folly Run, and 4.0 mi (6.4 km) southwest of Piedmont, W. Va., and at mile 59.4 (95.6 km).

DRAINAGE AREA.--266 mi² (689 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,151.82 ft (351.075 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Regulation at low flow by Stony River Reservoir, 39 mi (63 km) above station (see station 01595200).

AVERAGE DISCHARGE.--14 years, 542 ft³/s (15.35 m³/s), 27.67 in/yr (703 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,100 ft³/s (767 m³/s) July 3, 1978, gage height, 13.37 ft (4.075 m), from rating curve extended above 8,000 ft³/s (227 m³/s) on basis of slope-area measurement of peak flow; minimum, 10 ft³/s (0.28 m³/s) Oct. 2, 3, 1968, gage height, 1.69 ft (0.515 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (110 m³/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft³/s)	(m³/s)	(ft)	(m)	Date	Time	(ft³/s)	(m³/s)	(ft)	(m)
Oct. 10	0615	4210	119	6.91	2.106	June 16	1245	4190	119	6.90	2.103
Apr. 9	1030	4370	124	7.00	2.134	Aug. 18	1715	*5860	166	7.75	2.362
Apr. 30	1700	4630	131	7.14	2.176						

Minimum discharge, 37 ft³/s (1.05 m³/s) Sept. 29, 30, gage height, 2.02 ft (0.616 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	338	219	242	415	188	415	2340	2930	546	215	214	117
2	306	599	230	334	180	366	1520	1940	478	142	578	115
3	1170	1460	216	279	177	586	1240	1420	769	180	288	124
4	711	801	218	264	174	425	1250	890	1310	270	238	124
5	756	614	217	258	174	616	1100	752	824	180	246	258
6	1360	534	231	247	175	1740	907	678	732	199	224	186
7	868	496	267	243	164	980	772	674	837	196	180	111
8	756	520	256	250	156	1300	684	667	1040	706	143	89
9	2140	466	219	235	147	1560	3030	570	932	1510	145	81
10	3920	460	202	194	145	1140	1870	456	1230	788	282	74
11	3370	515	203	237	145	968	1290	405	1030	598	223	71
12	2130	450	201	822	141	699	1010	356	747	450	281	65
13	2200	445	314	512	136	635	932	468	599	1220	258	59
14	1710	426	725	534	136	610	1370	434	459	521	179	58
15	1310	390	477	732	132	556	1830	336	386	335	148	54
16	1070	391	408	608	145	1160	1320	288	2900	257	760	57
17	905	395	400	562	201	1160	1130	265	1670	219	353	54
18	766	371	306	543	199	2780	986	386	992	257	3240	52
19	663	339	336	572	175	1740	849	394	867	196	3090	51
20	573	305	318	956	178	1680	730	367	706	162	1560	50
21	505	287	294	362	259	1680	634	2820	580	137	1030	47
22	449	250	273	335	600	1490	545	1830	482	145	809	47
23	369	237	273	344	1400	1050	510	1310	390	266	628	48
24	290	226	277	273	1000	962	452	1110	277	283	466	108
25	263	229	1250	326	820	968	438	1660	243	183	371	79
26	247	268	1050	390	654	882	401	895	219	144	309	58
27	227	414	780	666	562	739	1090	628	192	126	250	57
28	221	303	666	622	527	712	1470	512	186	121	183	54
29	346	279	568	248	488	1770	1190	437	177	722	156	43
30	272	270	518	179	---	1300	3080	381	192	379	137	38
31	231	---	465	215	---	1970	---	432	---	234	124	---
TOTAL	30442	12959	12400	12757	9578	34639	35970	26691	21992	11341	17093	2429
MEAN	982	432	400	412	330	1117	1199	861	733	366	551	81.0
MAX	3920	1460	1250	956	1400	2780	3080	2930	2900	1510	3240	258
MIN	221	219	201	179	132	366	401	265	177	121	124	38

CAL YR 1979 TOTAL 260453 MEAN 714 MAX 6230 MIN 57 CFSM 2.68 IN 36.42
WTR YR 1980 TOTAL 228291 MEAN 624 MAX 3920 MIN 38 CFSM 2.35 IN 31.93

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
NOV , 1979												
16...	1000	426	270	4.8	5.5	6.5	11.7	--	--	.3	15	--
APR , 1980												
09...	1530	3790	124	5.5	19.0	10.0	11.3	51	44	.1	5.0	15
SEP												
12...	0930	74	652	4.0	16.0	18.6	8.9	--	--	.2	9.5	--

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
NOV , 1979												
16...	--	--	--	--	--	8	110	--	--	--	174	--
APR , 1980												
09...	3.2	2.0	8	.1	1.2	7	52	2.8	.1	3.4	104	88
SEP												
12...	--	--	--	--	--	--	290	--	--	--	486	--

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979												
16...	.24	200	2000	1630	370	780	20	760	--	--	--	--
APR , 1980												
09...	.14	1060	7600	7500	100	560	140	420	4.9	162	1660	--
SEP												
12...	.66	97.6	2500	2100	430	1800	100	1700	--	--	--	15.0

01596500 SAVAGE RIVER NEAR BARTON, MD

LOCATION.--Lat 39°34'05", long 79°06'10", Garrett County, Hydrologic Unit 02070002, on right bank 0.9 mi (1.4 km) upstream from Bear Pen Run, 1.5 mi (2.4 km) downstream from Popular Lick Run, 5.4 mi (8.7 km) northwest of Barton, and 10 mi (16 km) upstream from mouth.

DRAINAGE AREA.--49.1 mi² (127.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1948 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1603.88 ft (488.863 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for winter periods, which are fair to poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years, 75.1 ft³/s (2.127 m³/s), 20.77 in/yr (528 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,510 ft³/s (213 m³/s) Oct. 15, 1954, gage height, 8.45 ft (2.576 m), from rating curve extended above 1,600 ft³/s (45.3 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.40 ft³/s (0.011 m³/s) Sept. 3, 4, 1966, gage height, 0.96 ft (0.293 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 9	0315	*3700	105	6.13	1.868	May 21	0700	1230	34.8	3.87	1.180

Minimum discharge, 3.5 ft³/s (0.10 m³/s) Sept. 29, 30, gage height, 1.14 ft (0.347 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	26	57	57	25	88	450	373	59	16	12	7.9
2	31	150	53	48	27	100	296	286	51	12	11	7.9
3	147	270	56	42	30	129	166	215	51	15	12	8.8
4	114	210	64	36	25	137	191	158	51	15	11	9.6
5	170	170	41	36	21	142	173	127	41	12	9.8	25
6	237	140	45	36	18	194	147	100	42	16	9.0	14
7	179	120	49	37	17	171	119	84	38	9.2	8.6	10
8	165	100	46	31	17	142	125	71	46	151	8.2	8.8
9	319	85	41	31	16	178	1660	64	39	132	11	8.3
10	408	75	41	30	16	145	660	56	247	69	11	9.2
11	285	65	40	31	15	121	366	50	200	41	14	8.3
12	221	60	40	52	15	96	252	46	127	28	37	7.5
13	191	55	94	55	18	77	192	47	86	22	17	7.1
14	152	50	149	74	17	78	368	46	66	17	14	6.6
15	112	45	128	84	15	69	542	39	51	15	14	6.6
16	88	48	100	80	16	73	390	27	133	14	20	6.2
17	73	48	84	81	17	215	273	33	86	12	14	6.2
18	61	45	73	80	18	488	211	32	68	7.5	64	6.2
19	52	45	66	78	19	316	164	56	54	11	62	6.2
20	45	45	54	71	20	204	127	121	42	11	41	5.8
21	40	42	46	63	121	280	105	796	32	11	27	5.8
22	35	42	42	60	290	252	89	481	26	15	20	5.4
23	35	42	41	55	274	191	74	325	21	14	17	7.5
24	38	38	43	41	208	166	64	255	19	13	15	6.6
25	32	38	186	41	152	176	54	264	17	11	12	5.4
26	29	55	185	36	116	152	46	171	16	9.8	10	5.4
27	27	96	139	36	95	124	88	121	14	9.4	9.6	4.2
28	32	84	103	32	78	121	142	105	13	11	8.4	3.8
29	30	76	85	27	62	462	142	86	14	38	8.8	3.5
30	28	65	74	28	---	367	291	74	20	17	8.3	3.5
31	27	---	63	26	---	439	---	65	---	14	8.3	---
TOTAL	3430	2430	2325	1515	1778	5833	7989	4774	1770	788.9	545.4	227.3
MEAN	111	81.0	75.0	48.9	61.3	188	266	154	59.0	25.4	17.6	7.58
MAX	408	270	186	84	290	488	1660	796	247	151	64	25
MIN	27	26	40	26	15	69	46	27	13	7.5	8.2	3.5
CFSM	2.26	1.65	1.53	1.00	1.25	3.83	5.42	3.14	1.20	.52	.36	.15
IN.	2.60	1.84	1.76	1.15	1.35	4.42	6.05	3.62	1.34	.60	.41	.17

CAL YR 1979 TOTAL 35203.2 MEAN 96.4 MAX 1130 MIN 7.8 CFSM 1.96 IN 26.67
WTR YR 1980 TOTAL 33405.6 MEAN 91.3 MAX 1660 MIN 3.5 CFSM 1.86 IN 25.31

01596500 SAVAGE RIVER NEAR BARTON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
NOV , 1979												
15...	1100	34	79	6.8	-1.0	5.0	13.1	22	9	.0	.0	5.7
APR , 1980												
10...	1615	563	53	6.3	10.5	7.4	11.0	18	12	.1	5.0	4.7
SEP												
10...	1045	13	75	5.9	15.5	16.4	8.8	--	--	.0	.0	--

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV , 1979												
15...	1.8	2.8	28	.3	1.0	13	13	5.6	.0	4.6	51	45
APR , 1980												
10...	1.6	2.5	22	.3	1.2	6	13	4.0	.0	4.8	50	40
SEP												
10...	--	--	--	--	--	--	14	--	--	--	78	--

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	COAL IN BOTTOM MATE-RIAL (GM/KG)
NOV , 1979											
15...	.07	4.68	140	100	40	0	0	4	--	--	--
APR , 1980											
10...	.07	76.0	650	620	30	50	30	20	21	32	--
SEP											
10...	.11	2.74	150	130	20	20	10	10	--	--	10.0

01597000 CRABTREE CREEK NEAR SWANTON, MD

LOCATION.--Lat 39°30'00", long 79°09'35", Garrett County, Hydrologic Unit 02070002, on left bank 0.5 mi (0.8 km) upstream from mouth, 1.0 mi (1.6 km) downstream from Springlick Run, and 5.0 mi (8.0 km) northeast of Swanton.

DRAINAGE AREA.--16.7 mi² (43.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1948 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,529.06 ft (466.058 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Small diversion above station by Baltimore and Ohio Railroad. Several observations of water temperature were made during the year.

AVERAGE DISCHRAGE.--32 years, 29.1 ft³/s (0.824 m³/s), 23.66 in/yr (601 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,260 ft³/s (92.3 m³/s) July 12, 1949, gage height, 5.01 ft (1.527 m), from rating curve extended above 210 ft³/s (5.95 m³/s) on basis of slope-area and contracted-opening measurements of peak flow; minimum, 0.1 ft³/s (0.003 m³/s) Dec. 3, 1953, gage height, 0.56 ft (0.171 m); minimum daily, 0.8 ft³/s (0.023 m³/s) Nov. 6, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 330 ft³/s (9.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 9	0300	729	20.6	3.03	0.924	May 24	1915	*758	21.5	3.08	0.939
May 21	0345	402	11.4	2.50	0.762						

Minimum discharge, 2.0 ft³/s (0.057 m³/s) Sept. 30, gage height 0.74 ft (0.226 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.7	16	22	10	49	191	168	24	8.0	4.5	5.0
2	22	37	15	19	11	64	117	100	25	7.5	4.9	4.9
3	68	70	14	16	12	90	79	78	26	7.5	4.2	7.4
4	58	59	14	15	10	73	73	53	27	7.5	3.7	5.1
5	67	46	13	15	8.7	31	62	41	24	7.0	3.4	13
6	93	37	14	13	7.2	51	54	33	25	6.5	3.2	6.8
7	74	31	13	13	6.8	52	47	29	22	6.0	3.0	5.5
8	56	26	13	12	6.6	62	45	25	32	95	2.9	4.7
9	108	23	11	11	6.4	66	477	21	31	60	4.6	4.3
10	184	21	11	11	6.3	59	173	19	73	36	5.0	4.3
11	152	18	11	14	6.2	52	98	17	79	27	4.4	3.7
12	106	16	12	29	6.2	40	70	17	57	20	13	3.4
13	82	15	24	31	7.2	35	54	18	35	18	6.0	3.3
14	68	14	36	34	7.0	32	98	16	31	15	4.6	3.2
15	55	13	37	35	6.2	27	141	14	27	14	6.6	3.3
16	43	14	35	35	6.4	29	105	13	66	13	8.9	3.0
17	34	14	30	36	6.6	83	74	13	65	12	5.4	2.8
18	27	13	27	35	6.8	197	59	17	55	8.0	60	2.8
19	23	13	22	32	7.0	129	49	20	41	7.0	73	2.6
20	19	13	18	29	7.0	88	40	39	31	6.5	49	2.5
21	17	12	16	26	18	97	33	296	25	6.0	28	2.5
22	15	12	15	25	94	95	28	143	21	7.5	22	3.0
23	15	12	15	23	149	79	24	84	18	4.9	17	4.5
24	14	11	15	20	109	68	20	179	15	4.3	14	3.2
25	13	11	50	20	77	61	18	214	12	3.7	12	2.7
26	12	17	56	16	57	50	17	110	10	3.5	10	2.5
27	11	16	52	16	44	43	46	69	9.0	3.3	8.6	2.2
28	13	17	40	13	36	48	70	49	8.0	5.1	7.5	2.3
29	12	18	34	12	30	145	67	37	7.0	13	6.7	2.2
30	11	17	29	11	---	116	201	29	7.5	5.2	6.1	2.2
31	9.9	---	25	10	---	173	---	25	---	4.3	5.6	---
TOTAL	1492.9	645.7	731	649	766.4	2284	2630	1978	928.5	442.3	407.8	118.9
MEAN	48.2	21.5	23.6	20.9	26.4	73.7	87.7	63.8	31.0	14.3	13.2	3.96
MAX	184	70	56	36	149	197	477	296	79	95	73	13
MIN	9.9	9.7	11	10	6.2	27	17	13	7.0	3.3	2.9	2.2
CFSM	2.89	1.29	1.41	1.25	1.58	4.41	5.25	3.82	1.86	.86	.79	.24
IN.	3.33	1.44	1.63	1.45	1.71	5.09	5.86	4.41	2.07	.99	.91	.26

CAL YR 1979 TOTAL 14074.9 MEAN 38.6 MAX 634 MIN 3.0 CFSM 2.31 IN 31.35
WTR YR 1980 TOTAL 13074.5 MEAN 35.7 MAX 477 MIN 2.2 CFSM 2.14 IN 29.12

01597000 CRABTREE CREEK NEAR SWANTON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1979 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: February to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
NOV 15...	1700	14	100	6.7	4.5	6.5	11.2	--	--
APR 10...	1345	160	67	6.8	10.0	8.0	11.0	--	--
SEP 10...	1315	4.5	122	7.0	19.0	16.0	9.1	49	16

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)
NOV 15...	.0	.0	--	--	--	--	--	--	20
APR 10...	.1	5.0	--	--	--	--	--	--	23
SEP 10...	.0	.0	15	2.9	4.0	15	.2	1.4	33

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
NOV 15...	16	--	--	--	76	--	.10	2.87
APR 10...	16	--	--	--	58	--	.08	25.1
SEP 10...	13	6.5	.1	6.8	87	70	.12	1.06

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)
SEP , 1980 10...	1	0	100	0	10	10	30	10	2	<10

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV 15...	180	180	0	--	--	--	10	0	10
APR 10...	760	760	0	--	--	--	50	40	10
SEP 10...	170	160	10	5100	2	20	10	0	10

01597000 CRABTREE CREEK NEAR SWANTON, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR												
10...	--	--	--	--	--	--	--	--	2.0	33	14	--
SEP												
10...	700	.1	.00	0	0	0	10	50	--	--	--	10.0

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1									---	---	3	.40
2									---	---	3	.52
3									---	---	2	.46
4									2	.05	3	.56
5									2	.05	8	.67
6									2	.04	13	1.8
7									2	.04	14	2.0
8									2	.04	21	3.5
9									2	.03	14	2.5
10									2	.03	9	1.4
11									2	.03	9	1.3
12									2	.03	8	.86
13									2	.04	11	1.0
14									2	.04	9	.78
15									2	.03	9	.66
16									2	.03	8	.63
17									2	.04	85	30
18									2	.04	112	63
19									2	.04	29	10
20									2	.04	18	4.1
21									11	.63	52	15
22									140	39	21	6.0
23									62	25	14	3.0
24									26	8.0	15	2.8
25									16	3.4	14	2.3
26									14	2.2	11	1.5
27									11	1.3	11	1.3
28									10	.97	13	1.9
29									4	.32	51	20
30									---	---	14	4.4
31									---	---	71	39
TOTAL									---	81.46	---	223.34

01597000 CRABTREE CREEK NEAR SWANTON, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	27	15	35	16	11	.71	1	.02	1	.01	7	.09
2	12	3.6	22	6.1	10	.68	1	.02	1	.01	6	.08
3	11	2.3	15	2.8	11	.77	1	.02	1	.01	11	.26
4	14	2.8	11	1.6	14	1.0	1	.02	1	.00	7	.09
5	8	1.3	10	1.1	12	.78	1	.02	1	.00	20	1.3
6	5	.73	11	.98	14	.95	1	.02	1	.00	5	.09
7	5	.63	9	.70	7	.42	1	.02	1	.00	4	.06
8	20	5.0	9	.61	6	.52	204	52	1	.00	2	.03
9	323	521	11	.62	8	.70	35	5.6	1	.01	2	.02
10	43	21	7	.36	45	9.0	7	.68	1	.01	2	.02
11	14	3.7	8	.37	16	3.5	7	.51	1	.01	2	.02
12	19	3.4	9	.41	9	1.4	5	.27	29	1.3	2	.02
13	17	2.4	10	.49	6	.57	7	.34	5	.08	3	.03
14	55	17	8	.35	4	.33	2	.08	1	.01	3	.03
15	30	11	6	.23	4	.29	3	.11	1	.01	2	.02
16	17	4.9	7	.25	45	9.0	4	.14	1	.02	2	.02
17	13	2.6	7	.24	10	1.8	4	.13	1	.02	1	.00
18	11	1.8	21	1.0	8	1.2	5	.11	91	15	2	.02
19	13	1.7	30	2.0	6	.66	7	.13	130	27	1	.00
20	13	1.4	36	5.0	4	.33	6	.11	34	4.5	2	.01
21	13	1.2	113	97	2	.14	4	.06	30	2.5	3	.02
22	12	.91	30	12	1	.06	7	.14	18	1.1	2	.02
23	10	.65	17	4.0	1	.05	5	.07	16	.73	4	.05
24	12	.65	206	222	1	.04	4	.05	13	.51	3	.03
25	10	.49	146	99	1	.03	4	.04	13	.42	5	.04
26	8	.37	20	6.3	1	.03	5	.05	10	.27	4	.03
27	31	4.1	17	3.2	1	.02	5	.04	9	.21	3	.02
28	22	4.1	16	2.1	1	.02	17	.26	8	.16	3	.02
29	18	3.1	12	1.2	2	.04	40	1.6	8	.14	2	.01
30	105	59	12	.94	1	.02	9	.13	9	.15	2	.01
31	---	---	11	.74	---	---	3	.03	7	.11	---	---
TOTAL	---	697.83	---	489.69	---	35.06	---	62.82	---	54.30	---	2.46

01597500 SAVAGE RIVER, BELOW SAVAGE RIVER DAM, NEAR BLOOMINGTON, MD

LOCATION.--Lat 39°30'05", long 79°07'25", Garrett County, Hydrologic Unit 02070002, on left bank 0.7 mi (1.1 km) downstream from Savage River Dam, 1.1 mi (1.8 km) downstream from Crabtree Creek, 3.2 mi (5.1 km) northwest of Bloomington, and 3.7 mi (6.0 km) upstream from mouth.

DRAINAGE AREA.--106 mi² (275 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1948 to current year.

REVISED RECORDS.--WSP 1432: 1955.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,276.40 ft (389.047 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Diversions above station by Baltimore and Ohio Railroad and by cities of Frostburg and Westernport for municipal supply. Flow regulated by Savage River Reservoir beginning December 1950, capacity 20,000 acre-ft (24.7 hm³). Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--32 years, 166 ft³/s (4.701 m³/s), 21.27 in/yr (540 mm/yr), adjusted for storage since December 1950.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,530 ft³/s (185 m³/s) Oct. 16, 1954, gage height, 7.70 ft (2.347 m); minimum, 0.35 ft³/s (0.010 m³/s) Oct. 27, 1966, gage height, 0.57 ft (0.174 m); minimum daily, 0.6 ft³/s (0.017 m³/s) July 27-31, Aug. 5, 6, 9, 10, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,750 ft³/s (77.9 m³/s) May 21, gage height, 5.20 ft (1.585 m); minimum, 5.8 ft³/s (0.16 m³/s) Oct. 25, gage height, 0.77 ft (0.235 m); minimum daily, 17 ft³/s (0.48 m³/s) July 27, 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	96	93	253	75	86	1520	776	116	31	18	112
2	104	96	93	250	52	86	921	502	114	29	18	112
3	419	98	213	145	39	86	562	359	140	28	18	112
4	601	98	284	87	39	86	273	276	201	29	18	112
5	601	389	164	86	39	86	98	215	140	29	18	112
6	601	560	93	86	39	87	98	174	127	27	18	112
7	595	555	93	86	39	89	98	143	118	20	18	112
8	595	264	93	79	39	90	98	118	135	290	18	112
9	419	96	92	74	39	92	755	103	127	382	18	112
10	489	96	92	74	39	372	1500	88	471	149	19	112
11	601	96	205	75	39	523	1250	74	509	99	33	112
12	601	96	159	75	39	514	620	91	304	78	114	112
13	595	212	92	75	38	504	616	106	199	59	65	112
14	595	170	210	76	38	230	319	86	144	45	38	112
15	589	96	284	83	39	88	110	81	123	37	69	112
16	583	96	284	198	39	89	422	65	226	36	364	112
17	281	96	424	263	39	92	626	55	193	34	419	112
18	102	96	517	261	38	382	311	69	153	28	19	110
19	102	96	246	259	38	938	104	83	132	24	19	110
20	102	96	89	257	38	956	104	191	116	23	18	110
21	102	96	89	149	39	665	104	1730	88	21	51	110
22	101	96	89	86	56	518	104	921	74	23	114	110
23	101	96	89	188	90	518	89	498	64	25	114	110
24	101	96	89	147	94	343	57	415	56	23	114	110
25	84	96	92	86	367	280	56	531	58	19	114	110
26	216	96	351	86	814	207	57	322	45	125	114	106
27	301	206	513	86	769	90	89	216	41	17	114	106
28	296	282	352	86	492	91	108	162	36	18	114	106
29	182	280	259	86	350	98	108	130	34	18	114	106
30	96	164	259	82	---	100	378	116	39	17	114	106
31	96	---	256	75	---	933	---	121	---	17	112	---
TOTAL	10355	5806	6258	3999	3895	9319	11555	8817	4315	1792	2528	3314
MEAN	334	167	202	129	134	301	385	284	144	57.8	81.5	110
MAX	601	560	517	263	814	956	1520	1730	509	382	419	112
MIN	84	96	89	74	38	86	56	55	34	17	18	106
(≠)	9090	7040	4780	3930	4230	11320	20340	20120	20060	19980	18460	13310

CAL YR 1979 TOTAL 73735 MEAN 202 MAX 2220 MIN 15 CFSM 1.91 IN 25.88
WTR YR 1980 TOTAL 71153 MEAN 194 MAX 1730 MIN 17 CFSM 1.83 IN 24.97

≠ Monthend contents, in acre-feet, in Savage River Reservoir (contents on Sept. 30, 1979, 14,370 acre-feet). Records furnished by Corps of Engineers.

01597500 SAVAGE RIVER, BELOW SAVAGE RIVER DAM, NEAR BLOOMINGTON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT , 1979									
22...	1030	108	81	7.8	24.5	13.0	10.4	25	10
NOV									
15...	1800	103	81	6.7	4.0	9.0	10.4	25	15
DEC									
14...	1600	254	80	6.9	2.5	4.0	13.0	26	2
JAN , 1980									
17...	1430	240	95	6.9	4.0	2.0	13.4	26	0
FEB									
14...	1300	39	87	7.5	9.0	3.0	--	27	8
APR									
10...	1200	1406	69	6.9	12.5	7.5	11.9	20	13
MAY									
09...	1200	104	60	7.0	17.5	12.0	10.3	24	8
JUN									
11...	1000	443	61	6.7	18.0	16.0	9.8	23	11
AUG									
26...	1445	104	56	6.4	28.0	9.5	11.4	24	13
SEP									
10...	1430	112	59	5.9	22.0	10.3	11.8	--	--

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
OCT , 1979									
22...	.0	.0	6.9	2.0	3.2	27	.3	1.1	15
NOV									
15...	.0	.0	6.8	2.0	2.6	23	.2	1.2	10
DEC									
14...	.0	.0	7.2	2.0	2.8	24	.2	1.1	24
JAN , 1980									
17...	.0	.0	6.9	2.2	4.8	27	.4	1.1	27
FEB									
14...	.0	.0	7.2	2.1	3.6	22	.3	.9	19
APR									
10...	.1	5.0	5.3	1.7	2.3	19	.2	1.3	7
MAY									
09...	.1	5.0	6.6	1.8	2.8	19	.3	1.1	16
JUN									
11...	.1	5.0	6.1	1.9	2.7	19	.2	1.2	12
AUG									
26...	.1	5.0	6.2	2.1	2.6	18	.2	1.1	11
SEP									
10...	--	--	--	--	--	--	--	--	--

01597500 SAVAGE RIVER, BELOW SAVAGE RIVER DAM, NEAR BLOOMINGTON, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT , 1979								
22...	15	4.2	.1	4.6	52	48	.07	15.2
NOV								
15...	15	4.2	.0	4.5	49	45	.07	13.6
DEC								
14...	14	4.1	.0	4.9	51	53	.07	35.0
JAN , 1980								
17...	13	7.4	.0	5.2	52	60	.07	33.7
FEB								
14...	14	5.4	.1	5.4	47	53	.06	4.95
APR								
10...	14	3.5	.0	4.5	50	41	.07	190
MAY								
09...	14	3.5	.0	5.4	46	51	.06	12.9
JUN								
11...	14	3.4	.0	5.1	57	45	.08	68.2
AUG								
26...	16	4.0	.1	6.3	56	49	.08	15.7
SEP								
10...	14	--	--	--	53	--	.07	16.0

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT , 1979						
22...	200	160	40	50	30	20
NOV						
15...	160	130	30	30	20	10
DEC						
14...	160	120	40	30	20	6
JAN , 1980						
17...	300	260	40	30	20	10
FEB						
14...	100	60	40	30	10	20
APR						
10...	6200	6200	50	210	200	9
MAY						
09...	120	100	20	20	10	7
JUN						
11...	100	90	10	20	10	7
AUG						
26...	200	170	30	210	30	180
SEP						
10...	100	140	40	210	0	210

DATE	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	COAL IN BOTTOM MATE- RIAL (GM/KG)
OCT , 1979				
22...	10	2.9	79	--
NOV				
15...	3	.83	--	--
DEC				
14...	8	5.5	--	--
JAN , 1980				
17...	3	1.9	--	--
FEB				
14...	2	.21	--	--
APR				
10...	163	619	--	--
MAY				
09...	2	.56	--	--
JUN				
11...	1	1.2	--	--
AUG				
26...	3	.84	--	--
SEP				
10...	--	--	--	0.00

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD

LOCATION.--Lat 39°28'45", long 79°03'55", Mineral County, W. Va., Hydrologic Unit 02070002, on right bank 0.2 mi (0.3 km) downstream from Savage River, 0.5 mi (0.8 km) northwest of Luke, and at mile 53.3 (85.8 km).

DRAINAGE AREA.--404 mi^2 (1,046 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1899 to July 1906 (published as "at Piedmont, W. Va."), October 1949 to current year.

REVISED RECORDS.--WSP 192: 1899-1904. WSP 1432. 1905-6, drainage area at former site.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 944.22 ft (287.798 m) National Geodetic Vertical Datum of 1929. June 27, 1899, to July 15, 1906, nonrecording gage at bridge 1.1 mi (1.8 km) downstream at datum about 35 ft (11 m) lower.

REMARKS.--Water-discharge records good except those for winter periods, which are fair to poor. Flow regulated since 1913 by Stony River Reservoir, 45 mi (72 km) above station (see station 01595200), and since December 1950, by Savage River Reservoir, 5 mi (8 km) above station (see station 01597500). Some regulation at low flow by West Virginia Pulp and Paper Company at site used 1899-1906.

AVERAGE DISCHARGE.--37 years (water years 1900-05, 1950-80), 715 ft^3/s (20.25 m^3/s), 24.03 in/yr (610 mm/yr), adjusted for storage since October 1949.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,400 ft^3/s (1,120 m^3/s) Oct. 15, 1954, gage height, 17.15 ft (5.227 m); minimum daily, 6 ft^3/s (0.17 m^3/s) Sept. 4, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,000 ft^3/s (198 m^3/s) May 21, gage height, 8.41 ft (2.563 m); minimum, 134 ft ^{3}/s (3.79 m^3/s) July 28, gage height, 1.50 ft (0.457 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	431	348	365	713	320	680	4400	4130	712	250	234	244
2	421	620	372	632	340	600	2810	2780	649	187	566	238
3	1560	1680	435	475	350	660	1960	2040	955	196	360	243
4	1370	1020	534	388	370	640	1690	1370	1550	331	286	257
5	1400	1050	424	373	360	640	1350	1140	1060	229	285	400
6	2080	1210	359	366	300	1900	1110	1010	897	222	262	374
7	1530	1160	390	362	270	1160	967	947	1030	237	207	269
8	1410	893	383	366	240	1410	866	914	1220	835	167	233
9	2660	620	340	344	220	1720	3890	803	1170	2130	161	219
10	4680	620	324	304	210	1550	3850	669	1760	1060	296	209
11	4340	669	420	349	200	1550	2930	586	1710	770	266	201
12	3000	604	397	959	200	1280	1800	547	1190	587	408	194
13	3030	687	449	658	190	1210	1660	639	919	1240	364	185
14	2490	669	989	668	180	925	1890	624	705	636	230	183
15	1990	542	808	914	170	694	2260	497	567	412	207	178
16	1720	542	729	885	180	1280	1960	422	2850	316	764	181
17	1280	542	868	903	190	1320	1950	373	2100	269	699	176
18	944	500	878	877	210	3330	1480	488	1260	299	2590	175
19	821	467	667	922	230	2890	1090	574	1080	232	3280	173
20	720	439	458	1290	250	2830	958	652	888	191	1690	170
21	645	416	419	619	290	2530	846	5010	724	162	1160	167
22	590	379	400	498	808	2170	739	3320	606	166	984	170
23	519	351	402	578	2500	1660	687	2080	510	297	805	172
24	437	344	421	485	2300	1390	582	1620	371	344	629	237
25	394	344	1400	439	1800	1320	562	2430	314	224	535	211
26	497	379	1470	481	1600	1170	509	1390	278	262	462	182
27	569	624	1360	613	1300	889	1210	977	244	150	406	174
28	564	620	1100	787	1100	856	1740	777	223	145	328	172
29	583	588	892	369	900	2010	1440	652	212	617	297	160
30	418	687	831	290	---	1550	3420	571	215	477	273	153
31	369	---	766	310	---	3150	---	603	---	291	255	---
TOTAL	43462	19614	20050	18217	17570	46964	52606	40635	27969	13764	19456	6300
MEAN	1402	654	647	588	606	1515	1754	1311	932	444	628	210
MAX	4680	1680	1470	1290	2500	3330	4400	5010	2850	2130	3280	400
MIN	369	344	324	290	170	600	509	373	212	145	161	153

CAL YR 1979 TOTAL 362394 MEAN 993 MAX 8010 MIN 109 CFSM 2.46 IN 33.37
WTR YR 1980 TOTAL 326607 MEAN 892 MAX 5010 MIN 145 CFSM 2.21 IN 30.07

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1961 to December 1962, July to September 1963, December 1963 to September 1973, October 1974 to current year.

INSTRUMENTATION.--Temperature recorder during all periods.

REMARKS.--Period of missing record, Oct. 1 to Jan. 17, due to recorder malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 33.0°C July 3, 1966; minimum, 0.0°C on many days during winter periods.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1										---	---	---
2										---	---	---
3										---	---	---
4										---	---	---
5										---	---	---
6										---	---	---
7										---	---	---
8										---	---	---
9										---	---	---
10										---	---	---
11										---	---	---
12										---	---	---
13										---	---	---
14										---	---	---
15										---	---	---
16										---	---	---
17										---	---	---
18										4.5	4.0	4.5
19										4.5	4.0	4.0
20										5.5	3.5	4.5
21										4.5	2.0	3.0
22										2.5	2.0	2.5
23										2.5	1.5	2.5
24										1.0	1.0	1.0
25										1.5	1.0	1.0
26										2.0	1.0	1.5
27										1.5	1.0	1.0
28										4.0	2.0	3.5
29										2.5	1.0	2.0
30										1.0	1.0	1.0
31										1.0	1.0	1.0
MONTH										5.5	1.0	2.5

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.0	.5	.5	1.0	.5	1.0	---	---	---	11.5	9.5	10.5
2	.5	.5	.5	1.5	.5	1.0	---	---	---	12.0	11.0	11.5
3	.5	.5	.5	1.5	.5	1.0	10.0	9.5	10.0	13.5	12.0	12.5
4	.5	.5	.5	2.5	.5	1.5	11.5	10.0	10.5	14.5	12.5	13.5
5	.5	.5	.5	2.0	1.0	1.5	10.5	9.0	9.5	15.5	13.5	14.5
6	1.0	.5	.5	2.5	1.5	2.0	10.0	8.0	9.0	16.0	14.5	15.0
7	.5	.5	.5	4.5	2.5	3.0	10.5	9.0	10.0	15.5	14.5	15.0
8	1.0	.5	.5	7.0	4.5	6.0	10.5	10.5	10.5	14.5	13.0	14.0
9	1.0	.5	.5	7.5	6.0	6.5	11.0	10.0	10.5	13.0	12.0	12.5
10	1.0	.5	.5	6.0	4.5	5.5	10.5	9.0	10.0	14.0	11.0	12.5
11	1.0	.5	1.0	6.0	4.5	5.5	10.5	8.5	9.5	15.0	13.0	14.0
12	1.0	1.0	1.0	4.0	2.5	3.5	10.5	10.5	10.5	16.5	14.5	15.5
13	1.0	1.0	1.0	3.0	1.0	1.5	12.0	10.5	11.0	18.0	15.5	16.5
14	1.0	1.0	1.0	2.5	1.0	1.5	11.0	9.0	9.5	17.0	15.5	16.5
15	1.0	1.0	1.0	4.0	1.0	2.5	9.0	8.5	8.5	17.0	14.5	15.5
16	1.0	1.0	1.0	6.0	2.5	4.5	8.5	7.5	8.0	17.0	14.0	15.0
17	1.0	.5	1.0	6.5	5.5	6.0	8.5	6.0	7.5	15.5	14.5	15.0
18	1.0	.5	1.0	5.0	4.5	5.0	10.5	7.5	9.0	17.0	14.0	15.0
19	1.0	.5	1.0	5.5	4.0	5.0	12.0	9.5	10.5	17.0	15.5	16.0
20	1.0	1.0	1.0	7.0	5.5	6.0	13.0	10.5	12.0	16.0	15.5	16.0
21	1.0	1.0	1.0	8.0	7.0	7.5	14.5	12.0	13.0	15.0	14.0	14.5
22	1.5	1.0	1.0	7.0	5.0	5.5	14.0	12.0	13.0	16.5	13.5	15.0
23	3.5	1.5	3.0	6.0	4.5	5.5	15.0	12.0	13.5	16.5	15.5	16.0
24	5.5	3.5	4.5	6.5	6.0	6.0	14.0	13.0	13.5	18.0	16.0	17.0
25	5.5	4.5	5.0	6.5	6.0	6.5	14.0	12.5	13.0	17.5	16.0	16.5
26	4.5	2.0	3.5	6.5	5.0	6.0	12.0	11.0	11.5	17.5	15.5	16.5
27	2.5	1.0	2.0	---	---	---	11.0	9.5	10.0	16.5	14.5	15.5
28	1.5	1.0	1.0	---	---	---	10.0	9.5	9.5	17.5	14.5	16.0
29	1.5	.5	1.0	---	---	---	11.0	9.5	10.5	19.5	16.0	17.5
30	---	---	---	---	---	---	11.0	9.5	10.0	20.0	17.5	18.5
31	---	---	---	---	---	---	---	---	---	20.0	18.0	19.0
MONTH	5.5	.5	1.5	8.0	.5	4.0	15.0	6.0	10.5	20.0	9.5	15.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.0	18.5	19.5	23.0	20.0	21.5	23.0	22.0	22.5	24.5	21.5	23.0
2	20.5	19.5	20.0	22.5	20.5	21.5	23.0	21.0	22.0	24.5	22.0	23.5
3	21.0	19.0	19.5	22.5	21.5	22.0	23.5	22.0	22.5	25.0	22.0	23.5
4	20.0	18.0	18.5	24.0	21.5	22.5	24.0	22.0	23.0	24.0	22.0	23.0
5	19.0	16.0	17.5	23.5	22.0	22.5	25.0	22.5	23.5	23.5	22.0	22.5
6	19.0	17.0	18.0	24.5	22.0	23.0	24.5	23.0	23.5	23.5	22.0	22.5
7	20.5	18.5	19.5	23.5	21.5	22.5	25.0	22.5	23.5	23.5	21.0	22.5
8	20.5	19.0	20.0	22.5	19.0	21.0	25.5	23.0	24.0	23.5	20.5	22.0
9	18.5	16.5	17.5	20.0	18.5	19.0	25.5	23.5	24.5	22.5	20.5	21.5
10	17.0	15.5	16.0	21.5	19.5	20.5	25.5	23.5	24.5	22.5	20.5	21.5
11	16.0	14.0	15.0	23.0	20.0	21.5	25.5	23.0	24.0	22.0	18.5	20.5
12	16.5	14.0	15.5	23.5	22.0	22.5	25.0	23.0	24.0	21.5	18.5	20.0
13	18.0	15.0	16.5	22.0	20.0	21.0	24.0	22.0	23.0	22.0	19.0	20.5
14	19.5	16.0	17.5	22.5	19.5	21.0	24.5	21.5	23.0	22.5	20.0	21.0
15	20.0	18.0	19.0	23.5	20.5	22.0	23.5	22.5	22.5	21.5	20.5	21.0
16	19.0	15.5	17.0	25.0	21.5	23.0	22.5	20.0	21.0	20.5	19.5	20.0
17	16.0	14.5	15.0	24.5	22.5	23.5	20.5	19.0	19.5	21.0	19.0	20.0
18	16.5	15.0	15.5	24.5	22.0	23.5	19.5	17.0	18.0	21.0	19.5	20.5
19	18.0	16.0	17.0	24.5	22.0	23.0	19.5	17.5	18.5	21.5	18.5	20.0
20	19.0	17.5	18.0	25.5	22.5	24.0	20.0	19.0	19.5	21.0	18.5	20.0
21	18.5	17.0	17.5	25.0	23.5	24.5	20.0	19.5	20.0	21.5	19.5	20.5
22	19.5	16.5	18.0	24.5	23.0	24.0	20.0	19.0	19.5	22.5	19.5	21.0
23	20.5	18.0	19.0	24.0	22.5	23.5	21.0	19.0	20.0	22.0	20.0	21.0
24	21.0	19.0	20.0	24.0	21.5	22.5	22.0	20.0	21.0	20.0	18.5	19.5
25	21.0	18.5	19.5	24.0	21.5	22.5	23.0	20.5	21.5	19.5	18.0	19.0
26	22.0	18.5	20.5	24.5	21.5	23.0	23.0	20.5	21.5	19.5	18.0	18.5
27	22.5	19.5	21.0	24.5	22.0	23.5	23.5	21.0	22.0	18.0	15.5	16.5
28	23.0	20.5	22.0	23.5	22.0	22.5	23.5	21.0	22.0	17.5	15.0	16.0
29	23.0	21.5	22.5	22.0	20.5	21.0	24.0	21.0	22.5	18.0	15.0	16.0
30	22.5	21.0	21.5	22.5	20.5	21.5	23.5	22.0	23.0	17.0	15.0	15.5
31	---	---	---	23.5	21.5	22.5	23.5	21.5	22.5	---	---	---
MONTH	23.0	14.0	18.5	25.5	18.5	22.5	25.5	17.0	22.0	25.0	15.0	20.5

01599000 GEORGES CREEK AT FRANKLIN, MD

LOCATION.--Lat 39°29'38", long 79°02'42", Allegany County, Hydrologic Unit 02070002, on right bank at Franklin, and 1.2 mi (1.9 km) upstream from Westernport and mouth.

DRAINAGE AREA.--72.4 mi² (187.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1905 to July 1906 (published as "at Westernport"), October 1929 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1502: 1940.

GAGE.--Water-stage recorder. Datum of gage is 958.96 ft (292.291 m) Westvaco Corporation datum. May 4, 1905, to July 15, 1906, nonrecording gage at bridge 0.8 mi (1.3 km) downstream at different datum. Oct. 16, 1929, to Oct. 1, 1937, water-stage recorder at site 95 ft (29 m) downstream at present datum.

REMARKS.--Water-discharge records good. Records include about 0.5 ft³/s (0.014 m³/s) of sewage from city of Frostburg, which obtains its water supply from Big Piney Run (Monongahela River basin) and Savage River. A negligible discharge is diverted above station by Frostburg Water Co. for municipal supplies of Eckhart and Welch Hill. An undetermined amount of water is diverted from the upper third of basin into the Wills Creek basin by the Hoffman drainage tunnel (see station 01601500). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--51 years (water years 1930-80), 81.5 ft³/s (2.308 m³/s), 15.29 in/yr (388 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,500 ft³/s (241 m³/s) Mar. 17, 1936, gage height, 9.6 ft (2.93 m), site then in use, from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.6 ft³/s (0.045 m³/s) Sept. 29 to Oct. 13, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 29, 1924, reached a stage of about 10 ft (3.0 m), from floodmarks, at site 95 ft (29 m) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar. 31	1445	1890	53.5	7.71	2.350	May 21	0600	1840	52.1	7.63	2.326
Apr. 9	0415	1670	47.3	7.44	2.268	July 8	1615	*2180	61.7	8.04	2.451

Minimum discharge, 6.5 ft³/s (0.184 m³/s) Sept. 29, 30, gage height, 3.67 ft (1.119 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	36	50	68	37	48	814	268	100	27	21	16
2	61	156	49	63	40	55	480	210	111	24	20	15
3	190	140	44	58	43	53	190	169	124	24	17	17
4	99	102	45	54	39	54	325	151	120	24	20	17
5	174	87	45	52	37	63	239	137	95	22	16	50
6	159	82	46	49	33	75	198	124	94	21	16	23
7	140	75	46	49	29	66	174	115	89	20	15	17
8	140	70	44	46	27	84	164	100	111	308	13	15
9	213	66	41	45	26	100	959	99	95	201	18	14
10	246	69	39	39	25	89	485	86	198	118	16	17
11	201	61	39	43	24	86	291	81	124	82	28	13
12	198	54	39	63	24	75	236	84	111	63	42	12
13	169	53	82	50	28	70	204	100	94	57	23	11
14	133	52	86	72	25	69	413	76	79	50	16	11
15	115	48	70	99	24	72	384	69	69	44	24	11
16	99	48	66	94	24	82	279	63	131	41	28	11
17	89	45	63	90	25	226	223	59	99	38	19	11
18	79	44	53	92	26	351	190	95	75	26	73	10
19	72	42	58	92	27	216	164	84	62	23	75	9.1
20	66	40	53	82	30	176	147	147	53	21	45	8.5
21	61	38	49	76	48	233	140	1130	47	20	35	9.8
22	57	37	47	76	128	195	124	505	43	43	31	13
23	58	37	47	73	135	156	113	260	38	27	27	16
24	61	37	50	58	116	144	104	229	35	23	33	11
25	53	37	207	68	100	149	100	220	32	20	24	9.8
26	50	62	128	65	89	131	94	156	30	18	20	9.8
27	44	79	109	54	75	126	176	137	28	17	17	8.5
28	44	59	95	54	75	147	159	124	26	27	16	7.8
29	44	55	84	49	62	505	142	107	24	75	16	7.1
30	42	53	81	40	---	243	333	109	25	30	18	7.1
31	38	---	75	39	---	1130	---	120	---	24	24	---
TOTAL	3236	1864	2030	1952	1421	5269	8044	5413	2362	1558	806	408.5
MEAN	104	62.1	65.5	63.0	49.0	170	268	175	78.7	50.3	26.0	13.6
MAX	246	156	207	99	135	1130	959	1130	198	308	75	50
MIN	38	36	39	39	24	48	94	59	24	17	13	7.1
CFSM	1.44	.86	.91	.87	.68	2.35	3.70	2.42	1.09	.70	.36	.19
IN.	1.66	.96	1.04	1.00	.73	2.71	4.13	2.78	1.21	.80	.41	.21

CAL YR 1979 TOTAL 47423.0 MEAN 130 MAX 1680 MIN 14 CFSM 1.80 IN 24.37
WTR YR 1980 TOTAL 34363.5 MEAN 93.9 MAX 1130 MIN 7.1 CFSM 1.30 IN 17.66

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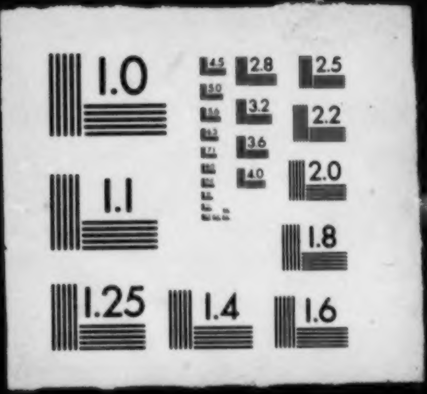
PB81

195885



01599000 GEORGES CREEK AT FRANKLIN, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT , 1979									
22...	1145	58	630	7.0	20.0	15.0	9.7	280	270
NOV									
15...	1240	45	630	6.3	4.0	5.0	12.5	290	280
DEC									
13...	1600	156	480	7.0	7.5	6.5	12.5	210	180
JAN , 1980									
17...	1615	236	450	6.6	4.0	4.0	12.6	200	180
FEB									
14...	0930	120	920	6.0	3.0	.5	--	450	440
APR									
10...	0945	819	372	6.9	12.5	8.0	11.4	150	130
MAY									
09...	1330	90	641	6.3	15.0	10.0	10.5	310	290
JUN									
10...	1630	516	413	6.6	19.5	15.0	9.8	170	160
AUG									
26...	1345	93	970	5.3	29.0	22.6	8.3	530	530
SEP									
10...	1645	17	1051	5.1	21.0	21.0	8.0	--	--

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
OCT , 1979									
22...	.0	.0	70	25	5.5	6	.1	1.0	12
NOV									
15...	.0	.0	70	28	8.2	9	.2	1.7	7
DEC									
13...	.0	.0	53	18	7.9	11	.2	1.9	27
JAN , 1980									
17...	.0	.0	51	18	7.9	8	.2	1.2	17
FEB									
14...	.1	5.0	110	42	8.4	4	.2	1.9	3
APR									
10...	.1	5.0	37	13	4.5	6	.2	1.4	17
MAY									
09...	.0	.0	75	30	5.4	4	.1	1.6	17
JUN									
10...	.1	5.0	43	16	5.4	6	.2	1.7	13
AUG									
26...	.2	10	130	51	7.0	3	.1	2.7	3
SEP									
10...	.3	4.8	--	--	--	--	--	--	--

01599000 GEORGES CREEK AT FRANKLIN, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT , 1979								
22...	250	7.1	.2	8.2	434	380	.59	68.0
NOV								
15...	270	6.9	.2	8.6	446	403	.61	54.2
DEC								
13...	180	11	.2	6.3	315	299	.43	133
JAN , 1980								
17...	180	11	.1	6.5	301	291	.41	192
FEB								
14...	440	9.3	.3	9.5	690	629	.94	224
APR								
10...	130	6.7	.1	6.2	269	216	.37	595
MAY								
09...	290	6.5	.2	8.0	510	437	.69	124
JUN								
10...	150	6.9	.1	6.8	296	242	.40	412
AUG								
26...	500	8.3	.3	13	795	721.	1.08	201
SEP								
10...	590	--	--	--	840	--	1.14	38.6

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT , 1979						
22...	2400	2220	180	1800	100	1700
NOV						
15...	3000	2650	350	1800	100	1700
DEC						
13...	8520	8500	20	1600	400	1200
JAN , 1980						
17...	2330	2200	130	1200	100	1100
FEB						
14...	3200	2800	380	2600	0	2800
APR						
10...	2200	2100	90	910	20	890
MAY						
09...	2700	2300	430	1700	0	1800
JUN						
10...	4300	4300	40	1200	240	960
AUG						
26...	2900	2500	360	2500	0	2600
SEP						
10...	2400	2800	40	2400	0	2700

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	COAL IN BOTTOM MATE-RIAL (GM/KG)
OCT , 1979				
22...	21	3.3	91	--
NOV				
15...	49	6.0	--	--
DEC				
13...	327	138	--	--
JAN , 1980				
17...	13	8.3	--	--
FEB				
14...	23	7.5	--	--
APR				
10...	58	128	--	--
MAY				
09...	23	5.6	--	--
JUN				
10...	66	92	--	--
AUG				
26...	28	7.1	--	--
SEP				
10...	--	--	--	41.0

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD

LOCATION.--Lat 39°33'59", long 78°50'25", Mineral County, W. Va., Hydrologic Unit 02070002, on right bank at downstream side of Western Maryland Railway bridge at Pinto, 2.8 mi (4.5 km) downstream from Mill Run, and at mile 32.6 (52.5 km).

DRAINAGE AREA.--596 mi^2 (1,544 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1332: 1943.

GAGE.--Water-stage recorder. Datum of gage is 648.23 ft (197.581 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 10, 1938, nonrecording gage at highway bridge 250 ft (76 m) downstream at same datum.

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Some regulation at low flow by Stony River Reservoir, 66 mi (106 km) above station (see station 01595200), and since December 1950, by Savage River Reservoir, 25 mi (40 km) above station (see station 01597500).

AVERAGE DISCHARGE.--42 years, 892 ft^3/s (25.26 m^3/s), 20.32 in/yr (516 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,000 ft^3/s (1,050 m^3/s) Oct. 16, 1954, gage height, 23.23 ft (7.081 m); minimum, 31 ft^3/s (0.88 m^3/s) Dec. 18, 19, 1943, gage height, 1.37 ft (0.418 m), result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 29, 1924, reached a stage of about 24 ft (7.3 m), discharge, about 55,000 ft^3/s (1,560 m^3/s). Flood of Mar. 17, 1936, reached a stage of about 23.5 ft (7.16 m), from floodmarks, discharge, about 50,000 ft^3/s (1,420 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,400 ft^3/s (266 m^3/s) May 21, gage height, 11.13 ft (3.392 m); minimum, 156 ft^3/s (4.42 m^3/s) July 28, gage height, 2.01 ft (0.613 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	491	352	388	955	364	660	6210	5410	891	282	275	292
2	587	803	376	791	348	576	4180	3520	853	239	560	275
3	2050	2340	380	724	299	707	2810	2650	1070	216	425	266
4	1820	1520	598	538	302	666	2540	1900	1690	314	302	295
5	1730	1310	609	525	295	666	2070	1540	1340	282	275	404
6	2550	1510	356	493	310	1830	1700	1350	1050	227	289	480
7	2000	1410	512	489	302	1440	1480	1230	1210	262	230	325
8	1820	1270	609	491	282	1430	1330	1160	1280	1030	192	275
9	2700	836	506	458	282	2020	4890	1030	1460	2820	173	256
10	4930	815	340	408	275	1750	4920	872	1810	1350	233	246
11	4740	846	450	408	252	1840	3870	748	2140	942	302	233
12	3300	760	582	1010	262	1520	2460	678	1480	707	364	227
13	3140	785	538	929	224	1390	2220	815	1140	1200	420	219
14	2740	878	1170	948	230	1220	2560	809	910	846	272	216
15	2270	649	1080	1400	252	872	3290	632	713	496	219	210
16	2010	620	955	1320	262	1450	2650	538	2650	368	955	204
17	1660	638	994	1320	282	1720	2550	470	2710	314	962	201
18	1210	582	1090	1240	285	4060	2120	604	1570	306	2330	198
19	1070	522	981	1250	292	3660	1580	748	1290	272	3890	192
20	936	480	626	1590	292	3240	1380	872	1080	227	2040	192
21	828	451	560	1010	344	3190	1230	6940	878	227	1320	190
22	742	402	533	730	1280	2910	1080	4630	724	233	1110	187
23	683	364	522	754	3260	2250	1000	2820	609	246	942	201
24	554	344	549	766	2910	1900	853	2150	470	376	748	219
25	480	340	1780	598	2410	1730	809	2820	376	279	615	252
26	486	460	2120	707	1930	1600	742	1890	333	246	517	213
27	666	744	1850	598	1800	1200	1380	1320	299	242	460	192
28	643	793	1550	1190	1330	1100	2390	1050	272	166	380	190
29	719	701	1230	547	1220	3060	1990	884	252	754	333	184
30	480	620	1130	416	---	2510	3770	772	242	689	314	173
31	392	---	1050	384	---	4300	---	809	---	352	317	---
TOTAL	50427	24143	26014	24987	22176	58467	72054	53661	32792	16510	21764	7207
MEAN	1627	805	839	806	765	1886	2402	1731	1093	533	702	240
MAX	4930	2340	2120	1590	3260	4300	6210	6940	2710	2820	3890	480
MIN	392	340	340	384	224	576	742	470	242	166	173	173

CAL YR 1979 TOTAL 448540 MEAN 1229 MAX 11100 MIN 147 CFSM 2.06 IN 28.00
WTR YR 1980 TOTAL 410282 MEAN 1121 MAX 6940 MIN 166 CFSM 1.88 IN 25.60

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-74, 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT , 1979									
22...	1300	1260	382	7.0	27.5	17.0	9.0	120	110
NOV									
16...	1245	1130	440	7.4	11.0	8.0	11.0	150	140
DEC									
13...	1400	632	445	7.5	9.0	7.5	11.2	160	130
JAN , 1980									
17...	1230	1417	315	7.3	5.0	3.5	12.9	110	71
FEB									
13...	1345	292	850	7.6	3.0	3.0	--	280	250
APR									
10...	1130	4600	160	7.0	14.0	9.5	11.1	62	38
MAY									
09...	1500	955	372	6.6	20.5	13.0	10.1	130	110
JUN									
10...	1515	2340	314	6.7	19.5	17.0	9.3	110	95
AUG									
26...	1215	582	504	6.7	27.0	23.9	7.9	170	160
SEP									
11...	1445	210	715	7.6	24.0	23.0	9.7	--	--

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
OCT , 1979									
22...	.0	.0	37	7.7	19	30	.7	2.0	17
NOV									
16...	.0	.0	45	8.5	27	34	1.0	2.0	8
DEC									
13...	.0	.0	49	8.2	20	26	.7	2.1	26
JAN , 1980									
17...	.0	.0	34	6.4	12	19	.5	1.2	40
FEB									
13...	.0	.0	92	13	59	31	1.5	4.1	38
APR									
10...	.1	5.0	18	4.2	5.0	15	.3	1.3	24
MAY									
09...	.1	5.0	38	8.3	18	23	.7	1.7	17
JUN									
10...	.2	10	32	7.3	13	20	.5	1.4	15
AUG									
26...	.2	10	56	8.3	29	26	1.0	2.9	14
SEP									
11...	--	--	--	--	--	--	--	--	--

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT , 1979								
22...	120	22	.1	6.1	238	227	.32	810
NOV								
16...	130	33	.1	6.2	279	259	.38	851
DEC								
13...	130	28	.1	5.8	275	262	.37	469
JAN , 1980								
17...	78	19	.1	5.4	182	184	.25	696
FEB								
13...	220	89	.2	6.6	539	510	.73	425
APR								
10...	50	7.7	.1	4.7	120	110	.16	1490
MAY								
09...	110	25	.1	5.7	264	221	.36	681
JUN								
10...	97	14	.1	5.4	208	182	.28	1150
AUG								
26...	140	51	.2	7.4	359	306	.49	564
SEP								
11...	200	--	--	--	490	--	.67	278

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT , 1979						
22...	770	750	20	750	30	720
NOV						
16...	1300	1240	60	720	40	680
DEC						
13...	670	600	70	610	10	600
JAN , 1980						
17...	1400	1200	160	410	0	420
FEB						
13...	1000	760	240	1000	0	1100
APR						
10...	4200	4100	70	380	110	270
MAY						
09...	890	850	40	630	0	640
JUN						
10...	3200	3200	40	600	140	460
AUG						
26...	920	880	40	620	10	610
SEP						
11...	500	390	110	600	0	610

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	COAL IN BOTTOM MATE-RIAL (GM/KG)
OCT , 1979				
22...	33	112	82	--
NOV				
16...	22	67	--	--
DEC				
13...	21	36	--	--
JAN , 1980				
17...	28	77	--	--
FEB				
13...	26	20	--	--
MAY				
09...	16	41	--	--
JUN				
10...	76	419	--	--
AUG				
26...	25	39	--	--
SEP				
11...	--	--	--	3.00

01601500 WILLS CREEK NEAR CUMBERLAND, MD

LOCATION.--Lat 39°40'07", long 78°47'18", Allegany County, Hydrologic Unit 02070002, on right bank at downstream side of Western Maryland Railway bridge, 2.0 mi (3.2 km) upstream from Cumberland, and mouth.

DRAINAGE AREA.--247 mi^2 (640 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1905 to July 1906 (published as "at Cumberland"), October 1929 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1432: 1906, 1930(M), 1933-34(M), 1936-37, 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 640.89 ft (195.343 m) National Geodetic Vertical Datum of 1929. May 6, 1905, to July 14, 1906, nonrecording gage at highway bridge 700 ft (213 m) upstream at different datum. Oct. 18, 1929, to Mar. 17, 1936, water-stage recorder, and Apr. 1, 1936, to Mar. 19, 1937, nonrecording gage at site 200 ft (61 m) upstream at present datum.

REMARKS.--Water-discharge records good. Records include drainage from numerous active and abandoned coal mines. An undetermined amount of water is diverted into the basin from Georges Creek basin by Hoffman drainage tunnel. Miscellaneous measurements of discharge from the Hoffman drainage tunnel have been made in the water years 1944, 1964-65, and 1967-80 by the U.S. Geological Survey, and in the water years 1958 and 1959 by the Maryland Geological Survey. See page 343. Slight diurnal fluctuation at low flow caused by quarry upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--51 years (water years 1930-80), 327 ft^3/s (9.261 m^3/s), 17.98 in/yr (457 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,100 ft^3/s (1,080 m^3/s) Mar. 17, 1936, gage height, 20.2 ft (6.16 m), from floodmarks at present site, from rating curve extended above 6,500 ft^3/s (184 m^3/s) on basis of slope-area measurements at gage heights 13.45 ft (4.100 m) and 20.2 ft (6.16 m); minimum, 9 ft^3/s (0.25 m^3/s) Oct. 14, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft^3/s (99 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Mar. 31	1945	4330	123	6.78	2.066	May 21	0945	4990	141	7.13	2.173
Apr. 9	0745	*10500	297	9.74	2.969						

Minimum discharge, 26 ft^3/s (0.74 m^3/s) Sept. 29, 30, gage height, 1.59 ft (0.485 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	231	206	441	354	140	180	3120	970	339	93	85	47
2	303	843	386	318	135	170	1840	869	314	86	79	45
3	1170	1410	316	279	130	204	1230	724	345	91	76	46
4	990	1010	298	258	120	226	1180	606	287	100	78	44
5	1180	747	278	242	120	253	923	516	240	88	88	180
6	1550	608	273	199	130	293	790	453	225	81	77	109
7	1150	520	254	229	140	235	695	401	214	76	68	78
8	864	447	227	201	135	353	734	350	279	1190	63	64
9	1160	398	204	189	131	477	6760	313	235	817	83	55
10	1120	400	191	149	127	437	2570	281	274	432	99	51
11	977	334	187	192	121	433	1430	259	219	274	86	46
12	933	292	182	240	119	360	1010	305	193	248	127	43
13	806	283	383	190	107	327	801	387	178	197	101	41
14	670	276	528	411	106	337	1380	377	166	155	79	40
15	590	253	520	710	111	325	1740	341	162	131	77	39
16	512	260	481	703	119	375	1360	305	360	118	75	39
17	458	242	430	682	107	928	958	272	256	107	66	37
18	399	233	322	632	98	2090	766	339	213	104	281	34
19	338	224	346	571	102	1490	641	336	192	90	154	32
20	298	216	298	503	108	1060	546	524	172	83	112	32
21	268	206	259	454	140	1370	477	3480	152	140	95	32
22	243	199	242	427	605	1300	420	2000	138	183	87	34
23	251	194	237	401	825	1010	382	1400	127	129	81	41
24	282	193	254	307	687	889	345	940	120	104	73	43
25	235	200	943	352	581	955	314	1100	114	88	65	39
26	215	697	925	296	495	828	289	720	106	80	60	35
27	201	966	779	226	401	724	504	500	101	75	56	32
28	219	824	626	251	359	692	533	380	95	78	53	30
29	239	655	525	213	265	2220	539	320	92	213	50	28
30	212	526	463	155	---	1710	837	335	97	127	51	28
31	206	---	408	150	---	3270	---	438	---	96	50	---
TOTAL	18270	13862	12206	10484	6764	25521	35114	20541	6085	5874	2666	1444
MEAN	589	462	394	338	233	823	1170	663	200	189	86.0	48.1
MAX	1550	1410	943	710	825	3270	6760	3480	360	1190	281	180
MIN	201	193	182	149	98	170	289	259	92	75	50	28
CFSM	2.39	1.87	1.60	1.37	.94	3.33	4.74	2.68	.81	.77	.35	.20
IN.	2.75	2.09	1.84	1.58	1.02	3.84	5.29	3.09	.90	.88	.40	.22

CAL YR 1979 TOTAL 200251 MEAN 549 MAX 8010 MIN 72 CFSM 2.22 IN 30.16
WTR YR 1980 TOTAL 158751 MEAN 434 MAX 6760 MIN 28 CFSM 1.76 IN 23.91

01601500 WILLS CREEK NEAR CUMBERLAND, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT , 1979									
22...	1305	242	260	7.8	25.5	17.0	9.6	110	66
NOV									
14...	1130	273	240	7.6	4.0	6.0	12.3	88	68
DEC									
13...	1000	273	280	7.8	5.0	7.0	11.7	110	82
JAN , 1980									
16...	1515	684	157	7.4	4.0	4.0	13.7	59	29
FEB									
13...	1130	100	430	7.8	4.0	1.0	--	180	140
APR									
08...	1250	603	157	6.7	17.0	11.5	11.0	59	35
MAY									
09...	1730	304	215	7.8	17.5	12.0	11.0	110	80
JUN									
10...	1400	296	180	7.6	19.5	16.0	10.4	110	71
AUG									
26...	0915	59	513	7.6	22.0	19.0	8.7	250	190
SEP									
10...	1545	49	476	8.2	22.0	21.7	10.0	--	--

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
OCT , 1979									
22...	.0	.0	29	8.2	4.7	12	.2	1.6	40
NOV									
14...	.0	.0	24	6.8	3.6	11	.2	1.3	20
DEC									
13...	.0	.0	31	8.7	6.6	15	.3	1.6	31
JAN , 1980									
16...	.0	.0	16	4.6	4.6	14	.3	1.1	30
FEB									
13...	.0	.0	48	15	7.5	8	.2	1.3	40
APR									
08...	.1	5.0	16	4.7	3.0	10	.2	1.3	24
MAY									
09...	--	--	28	9.0	4.5	8	.2	1.2	27
JUN									
10...	--	--	28	8.8	13	21	.6	1.5	35
AUG									
26...	--	--	67	21	8.1	6	.2	1.9	60
SEP									
10...	--	--	--	--	--	--	--	--	--

01601500 WILLS CREEK NEAR CUMBERLAND, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
OCT , 1979								
22...	68	7.7	.1	6.2	161	152	.22	105
NOV								
14...	55	6.4	.1	5.8	131	118	.18	96.6
DEC								
13...	69	10	.1	4.6	167	150	.23	123
JAN , 1980								
16...	31	7.2	.1	6.1	88	94	.12	163
FEB								
13...	130	13	.2	5.9	243	248	.33	65.6
APR								
08...	37	4.9	.1	5.9	110	93	.15	179
MAY								
09...	72	7.2	.1	4.5	182	146	.25	149
JUN								
10...	67	8.3	.1	5.4	187	157	.25	149
AUG								
26...	170	16	.2	6.5	378	328	.51	60.2
SEP								
10...	200	--	--	--	330	--	.45	44.3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT , 1979						
22...	310	270	40	180	10	170
NOV						
14...	310	290	20	160	10	150
DEC						
13...	2400	2400	20	330	120	210
JAN , 1980						
16...	520	480	40	100	20	80
FEB						
13...	360	350	10	520	10	510
APR						
08...	490	480	10	100	30	70
MAY						
09...	400	380	20	130	10	120
JUN						
10...	510	470	40	160	30	130
AUG						
26...	520	500	20	290	30	260
SEP						
10...	350	310	40	190	40	150

DATE	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	COAL IN BOTTOM MATERIAL (GM/KG)
OCT , 1979				
22...	3	2.0	88	--
NOV				
14...	9	6.6	--	--
DEC				
13...	85	63	--	--
JAN , 1980				
16...	12	22	--	--
FEB				
13...	2	.54	--	--
MAY				
09...	3	2.5	--	--
JUN				
10...	11	8.8	--	--
AUG				
26...	8	1.3	--	--
SEP				
10...	--	--	--	9.00

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD

LOCATION.--Lat 39°37'16", long 78°46'24", Allegany County, Hydrologic Unit 02070002, on left bank at downstream side of Wiley Ford Bridge, 2.0 mi (3.2 km) south of Cumberland, 2.1 mi (3.4 km) downstream from Wills Creek, and at mile 19.6 (31.5 km).

DRAINAGE AREA.--875 mi² (2,266 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1929 to current year. Gage-height records collected at various sites about 2.0 mi (3.2 km) upstream from September 1901 to December 1932 and thereafter at present site, are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 726: Drainage area. WSP 781: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 585.22 ft (178.375 m) National Geodetic Vertical Datum of 1929. Prior to June 18, 1929, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Regulation by Stony River Reservoir, 79 mi (127 km) above station (see station 01595200), and since December 1950, by Savage River Reservoir, 39 mi (63 km) above station (see station 01597500). Prior to July 1957, small amount of inflow from industrial wastes and sewage from city of Cumberland from water diverted from Evitts Creek, mouth of which is below station. Diversion to Chesapeake and Ohio Canal prior to 1935. Gage-height telemeter at station.

AVERAGE DISCHARGE.--51 years, 1,263 ft³/s (35.77 m³/s), 19.60 in/yr (498 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 88,200 ft³/s (2,500 m³/s) Mar. 17, 1936, gage height, 29.1 ft (8.87 m), from rating curve extended above 33,000 ft³/s (935 m³/s) on basis of slope-area measurement of peak flow; minimum (river only), 12 ft³/s (0.34 m³/s) Sept. 22, 1932, gage height, 2.38 ft (0.725 m); minimum daily (including flow in canal), 38 ft³/s (1.08 m³/s) Sept. 24, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 29.2 ft (8.90 m) June 1, 1889, discharge, about 89,000 ft³/s (2,520 m³/s). Flood of Mar. 29, 1924, reached a stage of 28.4 ft (8.66 m), discharge, about 82,000 ft³/s (2,320 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (280 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 1	0615	11300	320	10.77	3.283
Apr. 9	1230	13300	377	12.04	3.670
May 21	1815	*13700	388	12.25	3.734

Minimum discharge, 201 ft³/s (5.69 m³/s) Sept. 30; minimum daily, 204 ft³/s (5.78 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	699	613	987	1390	527	1070	10200	7120	1250	391	415	348
2	768	1560	902	1280	527	910	6730	4970	1220	375	570	322
3	2790	4050	815	1080	495	990	4440	3740	1380	342	633	303
4	3040	2820	940	868	442	1050	4040	2830	1910	409	437	331
5	2890	2130	933	839	442	1010	3280	2180	1720	452	409	593
6	4300	2230	767	748	480	2070	2690	1860	1330	353	401	629
7	3440	2020	770	759	473	1950	2270	1680	1430	352	346	442
8	2890	1860	756	759	442	1780	2120	1560	1480	1610	293	354
9	3690	1300	688	689	430	2690	10400	1430	1790	4030	291	311
10	6590	1250	628	617	420	2350	8430	1240	1830	1820	295	298
11	6990	1220	614	617	396	2480	5860	1110	2660	1180	452	277
12	5130	1120	774	1060	397	2090	3850	1080	1800	915	483	267
13	4530	1070	877	1230	357	1850	3280	1220	1400	1120	598	257
14	4000	1230	1610	1380	339	1760	4040	1240	1160	1060	428	250
15	3250	983	1680	2240	363	1320	5380	1040	941	621	337	250
16	2770	949	1470	2180	390	1740	4360	908	2100	461	638	242
17	2290	944	1390	2130	400	2690	3850	797	3780	390	1130	243
18	1620	895	1440	1990	397	6060	3210	935	2000	356	1730	237
19	1390	846	1410	1890	405	5750	2360	1090	1540	342	4980	229
20	1230	799	972	2120	405	4810	2000	1290	1320	278	2580	226
21	1090	761	859	1680	474	4900	1760	9310	1110	327	1500	225
22	986	715	808	1210	1480	4810	1550	8130	940	513	1210	231
23	942	666	785	1160	4330	3740	1430	4540	810	416	1040	241
24	863	645	817	1170	3780	3190	1280	3510	680	517	836	242
25	756	649	2770	998	3550	2970	1170	3990	552	455	694	298
26	681	1210	3310	1050	2660	2740	1100	2960	491	336	586	259
27	838	1760	2910	888	2460	2200	1730	1960	446	401	544	230
28	844	1720	2410	1310	1880	1900	3140	1530	403	280	451	220
29	929	1440	1870	888	1620	5100	2760	1300	382	847	388	216
30	748	1270	1660	642	---	4910	3910	1180	376	1010	361	204
31	645	---	1530	559	---	6920	---	1290	---	545	368	---
TOTAL	73619	40725	40152	37421	30761	89800	112620	79020	40231	22504	25424	8775
MEAN	2375	1358	1295	1207	1061	2897	3754	2549	1341	726	820	293
MAX	6990	4050	3310	2240	4330	6920	10400	9310	3780	4030	4980	629
MIN	645	613	614	559	339	910	1100	797	376	278	291	204

CAL YR 1979 TOTAL 702873 MEAN 1926 MAX 18000 MIN 217 CFSM 2.20 IN 29.88
WTR YR 1980 TOTAL 601052 MEAN 1642 MAX 10400 MIN 204 CFSM 1.88 IN 25.55

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1979 to September 1980.
WATER TEMPERATURES: October 1964 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1964 to current year.
INSTRUMENTATION.--Water-quality monitor since October 1979.
REMARKS.--Prior to October 1979 water temperatures were measured in field at time of sampling.
EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 954 micromhos Sept. 25, 1980; minimum, 152 micromhos May 23, 1980.
WATER TEMPERATURES: Maximum daily, 33.0°C July 13, 14, 1966, July 16, 18, Aug. 19, 23, 1968, July 17, 1977; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,600 mg/L Feb. 13, 1966, July 4, 1978; minimum daily mean, 1 mg/L Jan. 17, 1975.
SEDIMENT LOADS: Maximum daily, 66,300 tons (59,800 tonnes) July 4, 1978; minimum daily, 2.1 tons (1.9 tonnes) Aug. 27, 1971.
EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 954 micromhos Sept. 25; minimum, 152 micromhos May 23.
WATER TEMPERATURES: Maximum daily, 30.5°C Aug. 7, 8, 10; minimum daily, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)
OCT , 1979										
22...	1530	1060	350	7.4	21.0	17.0	9.2	120	99	.0
NOV										
14...	1315	1243	375	7.4	7.0	7.0	13.3	120	110	.0
DEC										
06...	1300	704	275	7.4	10.0	4.5	--	96	63	--
13...	1200	769	415	7.6	8.0	7.5	10.9	140	110	.0
JAN , 1980										
17...	1000	2130	261	7.2	6.0	3.0	13.4	95	50	.0
FEB										
13...	1545	354	730	7.5	3.5	.5	--	250	200	.0
APR										
04...	1500	4360	207	7.0	--	10.5	--	67	38	--
08...	1045	2016	294	6.9	17.0	11.5	11.0	110	78	.1
MAY										
12...	1200	1280	405	7.0	24.5	17.5	9.6	150	130	--
JUN										
10...	1230	1780	280	7.0	20.0	17.5	9.7	110	85	.2
JUL										
25...	1130	434	852	7.0	25.0	24.7	7.5	340	310	--
AUG										
26...	1100	600	467	6.9	26.0	23.0	8.0	160	150	.1
SEP										
12...	0900	260	665	7.0	16.0	19.4	7.8	--	--	--

DATE	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT , 1979										
22...	.0	36	7.6	15	26	.6	1.9	22	100	19
NOV										
14...	.0	34	7.3	20	33	.8	2.3	9	110	19
DEC										
06...	--	27	6.9	8.7	21	.4	1.7	33	63	13
13...	.0	43	7.5	21	29	.8	2.0	27	98	33
JAN , 1980										
17...	.0	28	6.0	9.3	17	.4	1.2	45	58	13
FEB										
13...	.0	78	13	46	28	1.3	3.5	48	190	64
APR										
04...	--	19	4.7	5.7	15	.3	1.5	29	41	8.9
08...	5.0	31	7.2	9.8	16	.4	1.5	29	87	14
MAY										
12...	--	44	9.4	17	20	.6	1.7	20	120	28
JUN										
10...	10	31	7.2	13	21	.5	1.7	22	87	12
JUL										
25...	--	110	16	39	20	.9	3.4	32	260	69
AUG										
26...	5.0	51	9.0	24	24	.8	2.8	19	120	41
SEP										
12...	--	--	--	--	--	--	--	--	180	--

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)
OCT . 1979									
22...	.1	6.0	221	201	.30	633	--	--	--
NOV									
14...	.1	5.7	221	207	.30	742	--	--	--
DEC									
06...	.2	5.6	158	146	.21	300	.71	.030	.09
13...	.1	5.2	248	229	.34	515	--	--	--
JAN . 1980									
17...	.1	5.7	149	153	.20	857	--	--	--
FEB									
13...	.2	6.4	466	433	.63	445	--	--	--
APR									
04...	.1	5.5	124	104	.17	1460	1.4	.070	.21
08...	.1	5.7	209	179	.28	1140	--	--	--
MAY									
12...	.1	5.5	282	244	.38	975	--	--	--
JUN									
10...	.1	5.4	206	174	.28	990	--	--	--
JUL									
25...	.2	6.6	613	525	.83	718	.30	.110	.34
AUG									
26...	.2	7.2	310	270	.42	502	--	--	--
SEP									
12...	--	--	461	--	.63	324	--	--	--

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT . 1979						
22...	460	440	20	560	10	550
NOV						
14...	740	730	10	500	30	470
DEC						
06...	350	300	50	230	10	220
13...	760	660	100	440	10	430
JAN . 1980						
17...	1100	1000	90	380	0	300
FEB						
13...	730	560	170	830	20	810
APR						
04...	1400	1400	30	230	50	180
08...	1300	1300	40	410	20	390
MAY						
12...	770	730	40	490	10	480
JUN						
10...	1100	1100	50	420	80	340
JUL						
25...	1200	1100	80	970	0	1100
AUG						
26...	880	810	70	500	40	460
SEP						
12...	750	600	150	440	0	440

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	COAL IN BOTTOM MATERIAL (GM/KG)
OCT , 1979				
22...	12	34	86	--
NOV				
14...	16	54	--	--
DEC				
13...	24	50	--	--
JAN , 1980				
17...	12	69	--	--
FEB				
13...	11	11	--	--
MAR				
29...	222	3560	54	--
APR				
01...	204	6170	66	--
08...	35	191	--	--
09...	242	8170	52	--
MAY				
12...	15	52	--	--
21...	530	16900	68	--
JUN				
10...	22	106	--	--
AUG				
26...	20	32	--	--
SEP				
12...	--	--	--	8.00

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
MAR							
29...	1130	5940	222	3560	31	39	45
APR							
01...	0810	11200	204	6170	40	50	56
09...	2100	12500	242	8170	35	41	44
MAY							
21...	1245	11800	530	16900	36	46	55

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
MAR							
29...	49	54	62	71	86	95	100
APR							
01...	61	66	76	86	96	98	100
09...	48	52	55	60	81	94	98
MAY							
21...	62	68	76	84	90	99	100

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	360	354	358	390	383	386	237	229	235	218	207	213
2	375	306	366	397	395	397	240	231	234	227	217	222
3	316	221	260	403	341	381	254	236	247	237	225	232
4	235	183	199	344	287	311	265	247	256	241	234	238
5	189	174	185	291	277	281	275	260	270	251	239	244
6	174	167	172	285	283	284	270	264	269	279	250	265
7	172	164	166	295	291	293	270	259	265	300	278	291
8	180	164	170	307	301	304	302	270	288	313	298	305
9	197	181	190	320	313	317	321	307	315	328	311	320
10	202	182	190	332	326	329	339	326	332	347	325	334
11	180	157	166	345	339	343	357	343	350	366	347	361
12	180	160	170	356	351	354	403	361	378	364	359	362
13	187	181	186	367	362	365	416	360	404	369	363	366
14	189	185	186	375	372	374	345	281	294	369	368	368
15	199	189	194	377	371	374	289	245	271	366	347	360
16	211	199	205	376	372	373	243	233	237	345	293	325
17	220	212	216	375	370	373	232	228	230	288	247	260
18	235	220	223	377	369	373	231	226	228	257	247	253
19	252	237	245	379	372	375	234	229	232	259	256	257
20	272	253	263	379	373	376	231	229	230	269	264	269
21	290	273	282	379	375	377	231	228	229	283	274	278
22	350	290	322	380	374	377	243	230	237	292	285	289
23	309	304	306	381	374	377	259	242	251	307	297	301
24	312	309	311	381	376	379	275	258	266	319	309	314
25	315	312	314	382	375	378	277	240	262	332	328	330
26	323	316	322	381	356	377	238	213	229	344	339	342
27	334	329	331	345	260	292	205	173	183	357	353	355
28	345	340	343	253	243	247	177	172	173	370	367	368
29	358	351	354	237	233	235	184	176	180	383	380	382
30	369	363	365	234	227	229	198	182	190	400	394	397
31	377	373	375	---	---	---	208	197	202	414	410	411
MONTH	377	157	256	403	227	341	416	172	257	414	207	310

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	426	423	425	314	287	298	239	123	196	273	235	246
2	439	436	438	348	316	332	289	232	259	254	236	243
3	455	450	453	378	351	367	298	230	264	277	254	266
4	469	466	468	375	350	356	235	207	224	296	277	285
5	484	480	482	348	336	341	262	248	254	321	296	308
6	500	495	497	355	319	342	273	256	264	338	322	329
7	511	509	510	311	276	286	276	260	266	372	334	351
8	546	533	539	288	262	278	294	267	275	397	374	386
9	575	569	572	257	224	241	312	253	281	397	381	390
10	610	598	604	220	207	211	264	201	217	411	394	401
11	648	634	642	208	192	198	225	202	212	405	378	393
12	688	672	681	199	188	193	243	215	230	413	397	405
13	730	712	722	204	195	199	260	243	253	390	379	386
14	719	701	710	248	207	223	268	260	263	378	370	374
15	709	691	699	275	218	238	263	230	248	367	342	357
16	693	681	688	287	259	271	228	210	216	337	332	334
17	680	665	674	259	188	216	263	226	240	338	328	332
18	667	652	660	211	176	193	291	264	273	366	331	348
19	660	639	649	224	164	191	280	257	267	376	357	362
20	510	488	498	159	153	157	298	277	287	373	275	327
21	528	464	507	159	148	152	304	285	296	284	205	243
22	455	307	382	151	143	147	322	299	310	198	156	170
23	357	267	294	209	140	174	331	311	324	164	152	157
24	269	261	265	177	160	163	340	325	333	280	155	202
25	260	245	249	159	147	151	362	334	346	273	272	272
26	255	243	248	145	139	141	372	356	365	272	266	268
27	248	244	246	154	132	139	372	357	366	269	264	266
28	271	244	254	164	152	159	363	340	354	274	262	266
29	289	268	278	167	129	150	353	316	336	278	266	271
30	---	---	---	126	119	123	321	277	289	287	270	277
31	---	---	---	233	124	170	---	---	---	290	279	283
MONTH	730	243	494	378	119	219	372	123	277	413	152	306

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	293	282	288	761	730	745	542	461	499	560	505	539
2	298	285	293	800	698	762	653	545	584	549	512	533
3	299	291	295	745	676	701	733	573	662	556	512	536
4	296	292	294	686	619	659	599	573	587	479	354	415
5	288	288	288	728	648	686	596	566	582	418	251	353
6	289	280	284	693	576	633	636	566	609	549	372	480
7	292	281	285	665	587	630	689	622	662	605	520	571
8	293	285	288	684	478	562	698	664	687	606	538	575
9	288	285	286	480	450	467	660	620	637	668	601	642
10	280	280	280	449	421	437	665	636	649	643	602	625
11	260	245	251	---	---	---	851	652	781	687	657	672
12	255	239	243	---	---	---	873	751	840	712	669	695
13	269	243	255	---	---	---	742	674	724	777	696	732
14	322	273	295	---	---	---	673	638	658	773	711	734
15	376	327	354	---	---	---	635	600	612	758	709	729
16	385	327	357	---	---	---	787	599	632	792	765	781
17	284	227	238	---	---	---	798	553	740	843	798	827
18	264	240	252	---	---	---	533	416	449	885	813	835
19	313	270	292	---	---	---	426	288	345	884	843	873
20	335	318	327	---	---	---	304	285	293	898	870	885
21	369	340	354	---	---	---	335	308	322	892	860	876
22	397	373	386	---	---	---	378	339	359	894	842	864
23	437	400	415	---	---	---	403	381	392	888	840	858
24	466	442	453	---	---	---	429	405	417	915	858	900
25	524	471	492	---	---	---	458	431	444	954	861	914
26	573	529	559	---	---	---	488	460	473	940	903	920
27	605	574	590	---	---	---	505	466	487	930	854	893
28	640	610	624	---	---	---	523	481	505	916	864	891
29	684	645	663	---	---	---	530	497	513	906	873	891
30	725	689	704	661	473	540	545	506	525	904	866	887
31	---	---	---	473	435	449	532	518	525	---	---	---
MONTH	725	227	366	800	421	606	873	285	555	954	251	731

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.0	19.5	19.5	12.0	9.5	10.5	4.0	3.0	3.5	2.5	1.0	2.0
2	20.5	19.5	20.0	12.0	11.0	11.5	4.5	3.0	3.5	2.0	1.5	2.0
3	19.0	17.0	18.0	11.0	10.0	10.5	3.5	2.0	2.5	3.0	2.0	2.5
4	17.5	16.0	17.0	9.5	8.0	9.0	4.0	2.5	3.0	2.5	1.0	2.0
5	17.0	14.0	16.0	8.5	7.5	8.0	5.0	3.0	4.0	1.0	.5	1.0
6	14.0	13.0	13.5	9.0	7.0	8.0	6.0	4.0	5.0	1.5	.0	.5
7	13.5	12.5	13.0	9.5	8.5	9.0	6.5	5.5	6.0	1.5	.0	.5
8	13.5	12.0	12.5	8.5	8.0	8.5	6.0	4.5	5.5	2.0	.0	1.0
9	14.0	13.5	13.5	9.5	8.5	9.0	4.5	3.5	4.0	1.5	.5	1.0
10	13.5	11.5	12.5	10.5	9.5	10.0	4.5	3.0	3.5	1.5	.0	.5
11	12.5	11.5	12.0	10.0	9.0	9.5	5.5	3.5	4.5	2.0	.5	1.0
12	12.5	12.0	12.5	9.0	8.0	8.5	7.5	5.0	6.0	2.0	.0	1.0
13	12.5	12.0	12.0	8.5	8.0	8.0	7.5	6.5	7.5	1.0	.0	.5
14	12.0	11.0	11.5	7.5	6.5	7.0	6.5	4.5	5.5	1.5	.5	1.0
15	11.0	10.0	10.5	6.5	5.5	5.5	4.5	3.0	3.5	3.0	1.5	2.5
16	12.0	11.0	11.5	7.5	6.0	6.5	3.5	2.0	2.5	3.5	2.0	2.5
17	13.0	12.0	12.5	7.0	5.0	6.5	3.0	1.0	2.0	4.0	3.0	3.5
18	14.5	13.0	13.5	8.5	6.5	7.5	1.0	.0	.5	5.0	4.0	4.5
19	15.5	13.5	14.5	8.5	7.0	7.5	1.5	.5	1.0	5.0	4.0	4.5
20	17.0	14.5	15.5	9.0	7.5	8.0	1.5	1.5	1.5	4.0	3.0	3.5
21	18.5	15.5	17.0	9.0	7.5	8.5	2.5	1.5	2.0	3.5	2.0	3.0
22	19.0	16.5	17.5	10.5	8.5	9.5	3.0	1.5	2.5	3.5	2.5	3.0
23	18.0	15.0	16.5	11.0	9.0	10.0	5.0	3.0	4.0	4.0	2.0	3.5
24	14.5	11.5	13.0	12.0	11.0	11.5	7.0	5.0	5.5	2.0	.0	.5
25	11.5	10.5	11.0	13.5	12.0	12.5	7.0	6.0	6.5	2.0	.0	1.0
26	10.5	9.5	10.0	14.5	12.0	13.5	6.0	4.5	5.5	3.0	1.0	2.0
27	10.0	8.0	9.0	11.5	9.5	10.5	4.5	3.5	4.0	2.5	1.0	1.5
28	10.0	9.0	9.0	9.5	8.0	8.5	4.0	3.0	3.5	3.0	2.0	2.0
29	11.5	9.0	10.5	8.0	5.0	6.5	3.5	2.5	3.0	3.0	1.0	2.0
30	12.0	10.0	11.0	5.0	3.5	4.0	3.5	2.0	3.0	2.0	.5	1.0
31	11.0	10.0	10.5	---	---	---	3.0	2.0	2.5	2.0	.0	1.0
MONTH	20.5	8.0	13.5	14.5	3.5	9.0	7.5	.0	4.0	5.0	.0	2.0

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.0	.0	.5	.5	.0	.0	8.5	7.5	8.0	12.5	10.0	11.0
2	.5	.0	.5	2.0	.0	.5	10.0	7.5	9.0	13.5	11.5	12.5
3	1.0	.0	.5	2.5	.0	1.0	10.5	8.5	10.0	15.0	12.0	13.5
4	1.0	.0	.5	.5	.5	.5	11.0	9.0	10.0	17.0	13.5	15.0
5	2.5	.5	1.0	4.5	2.5	3.0	10.5	8.5	9.5	18.0	14.0	16.0
6	1.5	.5	1.0	5.5	3.0	4.0	11.5	8.5	10.0	18.0	15.0	16.5
7	1.0	.5	.5	4.5	3.5	4.0	11.5	9.5	11.0	17.0	15.0	16.0
8	3.0	.0	1.0	8.0	4.5	6.5	12.0	11.0	11.5	15.5	13.5	14.5
9	2.0	.0	1.0	8.5	7.5	8.0	12.5	10.5	11.5	13.5	11.5	12.5
10	2.5	.0	.5	7.5	6.0	7.0	11.5	10.0	10.5	15.5	10.5	12.5
11	1.5	.0	1.0	7.0	5.0	6.0	11.5	9.0	10.5	17.0	13.5	15.0
12	1.0	.0	.0	5.0	3.5	4.5	11.5	10.5	11.0	18.0	15.5	16.5
13	.5	.0	.0	4.0	1.5	2.5	12.0	10.5	11.5	19.5	16.5	18.0
14	.0	.0	.0	3.5	1.0	2.0	11.5	10.0	10.5	18.5	16.0	17.5
15	.5	.0	.0	6.5	2.0	4.0	9.5	9.0	9.5	17.0	13.0	15.0
16	1.0	.0	.5	7.5	4.0	5.5	10.0	8.0	9.0	17.5	12.5	15.0
17	1.0	.0	.0	6.5	6.0	6.0	10.0	7.0	8.5	15.5	13.5	14.0
18	1.0	.0	.0	7.0	5.5	6.5	11.5	8.5	10.0	17.0	12.5	14.5
19	2.0	.0	.0	7.0	4.5	6.0	13.5	10.0	12.0	16.0	15.0	15.5
20	3.5	.0	1.5	7.5	6.5	7.0	15.0	11.5	13.0	15.5	14.0	14.5
21	4.0	2.0	3.0	8.5	7.5	8.0	17.0	13.0	15.0	13.5	12.0	12.5
22	2.5	.5	1.5	7.5	5.5	6.0	15.5	12.5	14.0	13.5	10.5	12.0
23	2.0	.5	1.0	8.0	5.0	6.5	17.0	13.0	14.5	14.0	12.0	13.0
24	4.0	2.0	3.0	7.5	7.5	7.5	15.5	13.0	14.5	15.5	13.0	14.0
25	5.0	3.5	4.0	7.5	7.0	7.5	16.0	13.0	14.5	15.0	15.0	15.0
26	4.5	2.5	3.5	7.5	6.0	6.5	14.0	12.0	12.5	15.0	15.0	15.0
27	2.5	1.5	1.5	9.0	5.5	7.0	11.5	10.5	11.0	15.5	15.0	15.0
28	2.0	.5	1.0	8.5	7.5	7.5	11.0	10.0	10.5	15.5	15.0	15.0
29	2.0	.0	.5	8.5	7.0	7.5	12.0	10.0	11.0	16.0	15.5	15.5
30	---	---	---	10.0	8.0	9.0	12.0	11.0	11.5	16.5	16.0	16.0
31	---	---	---	10.0	8.0	9.0	---	---	---	17.0	16.5	16.5
MONTH	5.0	.0	1.0	10.0	.0	5.5	17.0	7.0	11.0	19.5	10.0	14.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.0	16.5	17.0	26.0	21.5	23.5	24.5	23.0	23.5	28.0	23.5	25.5
2	17.5	17.0	17.0	26.0	22.0	23.5	26.5	23.0	24.5	28.5	23.5	26.0
3	17.5	17.0	17.5	24.5	23.0	23.5	27.0	24.0	25.0	28.5	24.5	26.0
4	17.5	17.5	17.5	27.0	22.0	24.5	29.0	24.5	26.5	27.0	23.5	25.0
5	17.0	17.0	17.0	26.0	23.5	25.0	29.5	25.0	27.0	24.5	23.0	23.5
6	17.5	17.0	17.0	27.5	23.5	25.0	29.0	25.5	27.0	25.5	23.0	24.0
7	17.5	17.0	17.0	27.5	22.0	24.5	30.5	25.0	27.5	25.5	22.5	24.0
8	17.5	17.5	17.5	24.0	21.5	22.0	30.5	25.5	28.0	25.5	22.0	23.5
9	17.5	17.5	17.5	21.0	20.0	20.5	29.0	25.0	27.0	25.0	21.5	23.0
10	17.5	17.5	17.5	20.0	18.5	19.5	30.5	25.5	27.5	24.5	21.5	23.0
11	20.0	16.0	17.0	---	---	---	30.0	26.0	27.5	24.5	20.0	22.0
12	18.5	15.5	17.0	---	---	---	29.0	26.0	27.0	24.0	19.5	21.5
13	20.0	15.5	17.5	---	---	---	28.0	25.0	26.0	24.5	20.0	22.0
14	21.5	17.0	19.0	---	---	---	28.5	24.5	26.0	24.5	21.0	22.5
15	21.0	18.5	20.0	---	---	---	25.5	24.0	25.0	23.5	22.0	22.5
16	20.5	18.0	19.5	---	---	---	25.5	23.0	24.0	23.0	21.0	22.0
17	18.0	16.0	17.0	---	---	---	23.5	19.0	21.0	24.0	21.0	22.0
18	19.0	16.0	17.5	---	---	---	19.5	17.0	19.0	24.0	21.0	22.5
19	20.5	16.5	18.5	---	---	---	21.0	18.5	19.5	24.0	20.0	22.0
20	21.0	18.0	19.5	---	---	---	21.5	21.0	21.0	24.0	20.5	22.0
21	21.0	18.0	19.5	---	---	---	21.5	21.5	21.5	24.0	21.0	22.0
22	22.0	18.0	20.0	---	---	---	22.0	21.0	21.5	25.0	21.5	23.0
23	23.5	19.5	21.0	---	---	---	23.0	20.5	21.5	23.5	22.5	23.0
24	23.5	21.0	22.0	---	---	---	24.5	21.0	22.5	23.5	21.0	22.0
25	24.5	21.0	22.5	---	---	---	25.5	22.0	23.5	22.0	20.5	21.0
26	26.0	21.0	23.5	---	---	---	26.0	22.5	24.0	21.5	19.5	20.5
27	26.0	22.0	24.0	---	---	---	26.5	23.0	24.5	21.0	17.5	19.0
28	27.5	22.5	24.5	---	---	---	27.0	23.0	24.5	20.5	16.0	18.0
29	26.5	24.0	25.0	---	---	---	27.5	23.5	25.0	20.5	16.0	18.0
30	24.5	23.5	24.0	22.5	20.5	21.5	27.0	24.0	25.0	19.0	16.5	17.5
31	---	---	---	25.0	21.0	22.5	27.0	23.5	25.0	---	---	---
MONTH	27.5	15.5	19.5	27.5	18.5	23.0	30.5	17.0	24.5	28.5	16.0	22.5

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1			---	---	8	27	16	17	30	34	16	15
2			---	---	9	30	16	16	30	46	26	23
3			---	---	17	64	16	15	33	56	17	14
4			---	---	25	130	17	19	29	34	15	13
5			---	---	34	160	17	21	20	22	22	35
6			---	---	14	50	18	17	17	18	26	44
7			---	---	15	58	25	24	14	13	20	24
8			---	---	23	93	119	848	16	13	18	17
9			---	---	35	172	139	1630	14	11	15	13
10			16	54	18	90	74	368	14	11	15	12
11			13	39	35	252	43	138	20	24	15	11
12			12	35	29	143	36	90	26	34	15	11
13			14	46	14	53	48	146	35	57	14	9.7
14			14	46	20	63	49	140	34	39	14	9.5
15			11	31	12	31	25	42	43	39	15	10
16			12	30	48	445	20	25	55	95	15	9.8
17			9	20	67	691	21	22	80	244	15	9.8
18			9	23	22	121	17	16	177	1330	15	9.6
19			14	42	23	97	18	17	312	4400	17	11
20			25	87	18	65	17	13	95	662	16	9.8
21			502	11500	13	39	30	26	37	150	17	10
22			175	4160	22	56	76	105	26	85	16	10
23			52	640	11	24	53	60	22	62	15	9.8
24			22	210	12	22	39	54	17	38	19	12
25			70	758	16	24	31	38	21	39	17	14
26			25	201	15	20	29	26	21	33	15	10
27			9	48	14	17	35	38	20	29	14	8.7
28			6	25	15	16	22	17	16	19	14	8.3
29			4	14	16	16	58	133	15	16	13	7.6
30			9	29	16	16	60	164	13	13	13	7.2
31			27	95	---	---	42	62	15	15	---	---
TOTAL			---	18133	---	3085	---	4347	---	7681	---	408.8

01603500 EVITTS CREEK NEAR CENTERVILLE, PA

LOCATION.--Lat 39°47'23", long 78°38'48", Bedford County, Hydrologic Unit 02070002, on left bank 2.0 mi (3.2 km) upstream from Thomas W. Koon Dam, 3.0 mi (4.8 km) south of Centerville, 7.0 mi (11.3 km) upstream from Rock Gully Creek, and at mile 16.3 (26.2 km).

DRAINAGE AREA.--30.2 mi^2 (78.2 km^2).

PERIOD OF RECORD.--September 1932 to current year. Prior to October 1952, published as "near Bedford Valley."

REVISED RECORDS.--WSP 781: 1933(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,027.59 ft (313.209 m) City of Cumberland datum.

REMARKS.--Records good except those for winter periods, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--48 years, 32.3 ft^3/s (0.915 m^3/s), 14.52 in/yr (369 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,240 ft^3/s (148 m^3/s) Mar. 17, 1936, gage height, 7.13 ft (2.173 m), from rating curve extended above 400 ft^3/s (11.3 m^3/s) on basis of slope-area measurements at gage heights 4.64 ft (1.414 m) and 7.13 ft (2.173 m); minimum, 0.70 ft^3/s (0.020 m^3/s) Dec. 17, 1958, gage height, 0.79 ft (0.241 m), result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 8 ft (2.4 m), from floodmark, date unknown.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft^3/s (11 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 9	0315	*606	17.2	3.08	0.939	July 21	2230	461	13.1	2.88	0.878
July 8	1630	591	16.7	3.06	0.933						

Minimum discharge, 4.0 ft^3/s (0.11 m^3/s) Sept. 29, 30, gage height 1.15 ft (0.351 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	25	30	34	16	20	251	81	29	8.8	8.6	4.9
2	24	192	30	32	17	21	163	65	28	8.1	8.0	4.7
3	220	132	26	30	16	20	121	58	29	9.6	7.6	4.9
4	68	88	26	27	16	24	132	52	24	9.2	8.0	4.6
5	132	68	25	25	16	23	95	48	21	8.1	8.4	15
6	126	61	24	23	16	21	77	44	21	7.4	7.4	8.4
7	88	54	24	24	15	20	67	40	20	6.8	8.8	7.6
8	68	49	22	22	15	37	79	37	24	251	12	6.6
9	85	45	20	19	15	32	406	34	19	65	7.4	6.0
10	77	48	19	17	14	26	188	32	20	34	9.6	5.6
11	61	40	18	19	13	26	135	30	17	25	8.8	5.2
12	70	36	18	24	12	23	108	37	15	49	14	5.0
13	65	36	63	22	12	22	90	36	15	24	10	4.9
14	50	34	46	97	12	25	200	30	14	18	8.5	4.9
15	46	30	30	92	12	25	150	27	15	16	8.2	4.9
16	42	30	29	61	13	39	115	25	39	15	7.8	4.8
17	44	29	29	56	12	121	92	24	18	14	6.6	5.0
18	39	28	32	52	11	135	77	32	15	12	30	4.8
19	36	26	26	46	12	83	65	32	14	11	16	4.4
20	34	25	26	41	13	72	58	38	13	8.6	11	4.4
21	32	24	24	39	19	150	52	208	12	140	9.5	4.6
22	30	24	24	38	61	105	48	102	12	113	8.4	6.2
23	40	23	25	38	41	81	44	77	11	34	7.6	7.1
24	39	23	27	36	32	77	41	67	11	24	7.0	5.1
25	32	24	138	34	29	77	38	65	10	18	6.4	4.6
26	29	85	58	29	26	59	36	48	9.6	16	6.0	4.6
27	27	54	49	26	23	53	63	41	9.2	59	5.8	4.2
28	36	40	44	26	25	81	58	37	8.8	65	5.4	4.2
29	30	37	41	21	23	196	49	32	8.8	27	5.0	4.2
30	27	34	39	17	---	113	97	34	10	13	5.2	4.2
31	26	---	37	18	---	300	---	36	---	10	5.0	---
TOTAL	1746	1444	1069	1085	557	2107	3195	1549	512.4	1119.6	278.0	165.6
MEAN	56.3	48.1	34.5	35.0	19.2	68.0	107	50.0	17.1	36.1	8.97	5.52
MAX	220	192	138	97	61	300	406	208	39	251	30	15
MIN	23	23	18	17	11	20	36	24	8.8	6.8	5.0	4.2
CFSM	1.86	1.59	1.14	1.16	.64	2.25	3.54	1.66	.57	1.20	.30	.18
IN.	2.15	1.78	1.32	1.34	.69	2.60	3.94	1.91	.63	1.38	.34	.20

CAL YR 1979 TOTAL 20110.0 MEAN 55.1 MAX 811 MIN 9.0 CFSM 1.83 IN 24.77
WTR YR 1980 TOTAL 14827.6 MEAN 40.5 MAX 406 MIN 4.2 CFSM 1.34 IN 18.26

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV

LOCATION.--Lat 39°26'49", long 78°39'16", Hampshire County, Hydrologic Unit 02070001, on left bank at highway bridge, 2.0 mi (3.2 km) east of Springfield, and at mile 13.4 (21.6 km).

DRAINAGE AREA.--1,471 mi² (3,810 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1894 to February 1896 (fragmentary), June 1899 to February 1902, August 1903 to July 1906, August 1928 to current year.

REVISED RECORDS.--WSP 1552: 1903-06, 1929-30(M), 1932-33(M), 1935(M), 1937-40(M), 1942-43(M), 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 562.02 ft (171.304 m) National Geodetic Vertical Datum of 1929. June 1894 to February 1896, nonrecording gage at Baltimore & Ohio Railroad bridge 11.2 mi (18.0 km) upstream at different datum. June 26, 1899, to Feb. 2, 1902, nonrecording gage at bridge 10.0 mi (16.1 km) upstream at different datum. Aug. 28, 1903, to July 14, 1906, nonrecording gage at present site at different datum. Aug. 8 to Sept. 24, 1928, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good except those for February, which are fair. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--56 years (water years 1900-01, 1904-05, 1929-80), 1,302 ft³/s (36.87 m³/s), 12.02 in/yr (305 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 143,000 ft³/s (4,050 m³/s) Mar. 18, 1936, gage height, 34.2 ft (10.42 m), from rating curve extended above 28,000 ft³/s (793 m³/s) on basis of measurement made about 10 mi (16 km) upstream from station, adjusted for storage and inflow and slope-area measurement at gage height 29.84 ft (9.095 m); minimum, 29 ft³/s (0.82 m³/s) Jan. 28, 1956, result of freezeup, July 30, 1966, result of temporary dam; minimum gage height, 0.39 ft (0.119 m) July 30, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877 reached a stage of about 34 ft (10.4 m), from floodmarks, discharge, 140,000 ft³/s (3,960 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (280 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 10	1915	16000	453	12.70	3.871	Apr. 15	2045	10900	309	10.10	3.078
Mar. 18	1815	10600	300	9.92	3.024	May 1	0545	*24000	680	16.07	4.898
Apr. 10	0630	10500	297	9.85	3.002	May 21	2330	11800	334	10.60	3.231

Minimum discharge, 135 ft³/s (3.850 m³/s) Sept. 16, 17, gage height, 1.63 ft (0.497 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	966	619	1920	1450	1000	1110	6720	19200	2130	334	361	261
2	894	1120	1650	1290	870	770	5610	9620	1580	320	347	248
3	3490	6880	1440	1160	790	730	4370	6030	1360	366	333	239
4	4230	5740	1230	1060	770	940	3680	4400	1380	400	311	230
5	3750	3820	1140	1000	830	1220	3380	3460	1210	420	284	235
6	6930	2910	1080	950	840	2620	2870	2880	1000	361	347	243
7	5080	2350	1020	860	780	3210	2500	2560	990	338	405	235
8	3490	1970	950	835	730	2770	2210	2230	1000	430	361	216
9	4130	1710	853	844	730	2990	3650	1890	930	1110	315	198
10	11700	1530	766	758	670	2940	9180	1680	900	970	293	189
11	11500	1440	710	690	650	2560	6010	1510	1160	835	297	176
12	8020	1440	682	835	620	2270	4190	1380	1140	742	306	162
13	7020	1630	710	1360	590	1920	3370	1290	880	612	288	158
14	5670	1810	910	2290	540	1820	3000	1220	734	612	257	153
15	4150	1790	1010	7290	557	1690	7500	1090	654	499	248	149
16	3210	1680	890	5190	591	2110	8000	970	1380	420	275	140
17	2610	1590	835	3820	620	3820	5160	871	1430	371	266	135
18	2110	1440	782	3180	620	8690	3850	920	1020	338	531	158
19	1780	1320	696	6160	570	7820	3170	1050	774	338	1930	158
20	1530	1200	710	6180	591	5090	2710	1070	668	334	1590	149
21	1350	1090	718	4420	626	4180	2340	5830	584	306	1020	149
22	1200	1000	668	3460	835	5880	2040	8860	518	324	808	158
23	1090	930	640	2930	2450	4930	1810	5060	475	493	647	171
24	1030	890	640	2490	3010	3850	1650	3480	440	1110	570	167
25	1000	880	2810	2100	2610	3270	1520	3120	415	734	518	158
26	900	2060	4820	1900	2150	2930	1420	3240	400	550	457	162
27	817	4840	3480	1790	1790	2490	3000	2440	385	440	400	180
28	758	3950	2700	1680	1520	2170	6600	1900	366	385	361	207
29	718	2940	2160	1540	1370	3590	4700	1590	352	385	329	203
30	703	2350	1850	1370	---	4330	8700	1380	338	410	306	180
31	661	---	1620	1200	---	4140	---	2410	---	410	279	---
TOTAL	102487	64919	42090	72082	30320	98850	124910	104631	26593	15697	15040	5567
MEAN	3306	2164	1358	2325	1046	3189	4164	3375	886	506	485	186
MAX	11700	6880	4820	7290	3010	8690	9180	19200	2130	1110	1930	261
MIN	661	619	640	690	540	730	1420	871	338	306	248	135
CFSM	2.25	1.47	.92	1.58	.71	2.17	2.83	2.29	.60	.34	.33	.13
IN.	2.59	1.64	1.06	1.82	.77	2.50	3.16	2.65	.67	.40	.38	.14

CAL YR 1979 TOTAL 808707 MEAN 2216 MAX 29200 MIN 283 CFSM 1.51 IN 20.45
WTR YR 1980 TOTAL 703186 MEAN 1921 MAX 19200 MIN 135 CFSM 1.31 IN 17.78

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1963, 1965, 1969, 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)
OCT								
02...	1635	840	195	8.6	26.0	19.5	--	--
DEC								
18...	1525	749	215	9.1	--	2.0	--	14.0
JAN								
29...	1615	1470	210	8.1	--	3.0	--	12.8
FEB								
13...	1230	648	260	8.3	--	1.5	--	13.6
MAR								
18...	1030	7600	280	7.9	--	8.0	--	--
APR								
29...	1240	4720	130	7.8	24.0	12.0	--	--
JUN								
10...	1540	883	200	8.5	20.0	20.0	--	--
JUL								
23...	1030	403	220	7.8	23.0	26.0	--	--
AUG								
18...	1100	304	200	7.9	23.5	23.0	8.7	--
SEP								
10...	1510	190	230	8.1	24.0	25.0	--	--

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN										
29...	88	24	.0	.0	28	4.3	2.7	.1	63	25
FEB										
13...	110	32	.0	.0	35	5.0	2.9	.1	75	27
MAR										
18...	64	27	--	--	19	3.9	2.7	.1	29	21
APR										
29...	64	22	--	--	20	3.4	2.2	.1	44	18
JUN										
10...	96	25	--	--	31	4.5	2.4	.1	73	20
JUL										
23...	120	29	.2	10	37	5.7	3.1	.1	87	20
AUG										
18...	110	28	.0	.0	34	5.4	3.1	.1	88	26
SEP										
10...	120	32	--	--	36	7.1	3.3	.1	87	25

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	COBALT, DIS-SOLVED (UG/L AS CO)
JAN									
29...	3.1	--	111	.15	441	--	--	--	--
FEB									
13...	3.7	--	131	.18	229	--	--	--	--
MAR									
18...	3.1	--	98	.13	2010	--	--	--	--
APR									
29...	1.8	--	92	.13	1170	--	--	--	--
JUN									
10...	2.6	--	119	.16	284	--	--	--	--
JUL									
23...	3.0	--	144	.20	157	--	--	--	--
AUG									
18...	3.3	5.6	140	.19	115	70	0	1	3
SEP									
10...	3.3	--	133	.18	68.2	--	--	--	--

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN									
29...	--	70	50	20	--	--	10	1	9
FEB									
13...	--	100	80	20	--	--	10	6	4
MAR									
18...	--	4300	4200	60	--	--	200	200	0
APR									
29...	--	1000	970	30	--	--	50	50	5
JUN									
10...	--	370	350	20	--	--	20	10	7
JUL									
23...	--	500	480	20	--	--	40	30	10
AUG									
18...	10	730	720	6	10	4	60	50	6
SEP									
10...	--	350	340	10	--	--	40	30	10

DATE	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
AUG							
18...	10	310	6.0	4	3.2	19	16

01609000 TOWN CREEK NEAR OLDTOWN, MD

LOCATION.--Lat 39°33'12", long 78°33'19", Allegany County, Hydrologic Unit 02070003, on left bank at downstream side of bridge on Pack Horse Trail (formerly Oldtown Road), 0.4 mi (0.6 km) northeast of Maryland State Highway 51, 2.0 mi (3.2 km) upstream from mouth of Sawpit Run, 3.0 mi (4.8 km) northeast of Oldtown, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--148 mi² (383 km²).

PERIOD OF RECORD.--July 1928 to September 1935, June 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 547.97 ft (167.021 m) National Geodetic Vertical Datum of 1929. July 1928 to September 1935, nonrecording gage on upstream side of highway bridge at datum 0.08 ft (0.024 m) lower.

REMARKS.--Records good except those for winter periods, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years (water years 1929-35, 1968-80), 161 ft³/s (4.560 m³/s), 14.77 in/yr (375 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s (331 m³/s) June 22, 1972, gage height, 14.13 ft (4.307 m); minimum, 0.9 ft³/s (0.025 m³/s) Aug. 2, 3, 7-14, 1930, gage height, 1.49 ft (0.454 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17 or 18, 1936, reached a stage of 19.08 ft (5.816 m), from floodmarks, discharge, 27,000 ft³/s (765 m³/s), from rating curve extended above 9,500 ft³/s (269 m³/s) on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 3	0100	2230	63.2	8.70	2.652	Apr. 9	Unknown	Unknown		Unknown	
Nov. 27	0130	*2470	70.0	9.11	2.777	May 21	1730	2320	65.7	8.85	2.697

Minimum discharge, 8.4 ft³/s (0.24 m³/s) Sept. 29, 30, gage height, 1.95 ft (0.594 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	89	216	152	64	68	1100	557	138	24	54	15
2	81	682	188	139	66	66	820	440	127	21	44	15
3	508	1480	154	126	66	64	640	339	123	21	37	16
4	476	619	142	116	66	70	540	273	106	22	32	16
5	540	389	135	110	64	90	480	226	86	22	29	41
6	700	298	129	94	62	83	420	196	77	20	26	55
7	550	248	121	96	62	70	380	173	75	17	24	30
8	450	207	105	84	60	74	480	150	77	396	22	21
9	560	184	93	74	60	149	1500	135	82	438	20	19
10	540	182	88	68	56	126	1400	122	73	132	22	18
11	505	165	85	74	54	116	1000	114	66	85	23	16
12	415	144	81	84	50	101	720	110	55	103	32	15
13	462	134	119	78	49	99	550	176	49	72	29	15
14	336	127	288	464	50	92	670	153	46	51	23	14
15	270	118	193	1020	52	107	750	125	44	41	24	14
16	227	113	172	699	54	167	580	107	76	36	22	11
17	195	105	158	522	50	418	460	96	86	34	20	11
18	173	98	135	410	47	749	350	138	54	32	44	11
19	151	92	142	350	48	496	279	154	46	27	45	10
20	136	88	121	288	50	410	238	237	41	24	35	9.6
21	123	82	107	246	60	553	209	1580	37	23	64	9.2
22	112	79	101	220	112	578	183	1000	35	105	52	10
23	110	75	98	203	189	389	168	507	32	80	37	9.6
24	171	73	99	163	137	350	153	425	30	52	28	9.2
25	134	74	772	150	114	353	144	607	29	38	24	10
26	116	892	632	120	104	233	129	335	28	31	21	10
27	107	1240	384	100	79	186	282	232	26	26	19	8.8
28	103	541	279	105	77	222	358	183	24	24	18	8.8
29	118	359	226	84	80	890	296	153	24	253	18	8.8
30	104	269	197	70	---	740	367	134	23	141	18	8.8
31	94	---	174	75	---	800	---	188	---	76	15	---
TOTAL	8637	9246	5934	6584	2082	8989	15646	9365	1815	2467	921	465.8
MEAN	279	308	191	212	71.8	290	522	302	60.5	79.6	29.7	15.5
MAX	700	1480	772	1020	189	890	1500	1580	138	438	64	55
MIN	70	73	81	68	47	64	129	96	23	17	15	8.8
CFSM	1.89	2.08	1.29	1.43	.49	1.96	3.53	2.04	.41	.54	.20	.11
IN.	2.17	2.32	1.49	1.65	.52	2.26	3.93	2.35	.46	.62	.23	.12

CAL YR 1979 TOTAL 93519.8 MEAN 256 MAX 2690 MIN 29 CFSM 1.73 IN 23.51
WTR YR 1980 TOTAL 72151.8 MEAN 197 MAX 1580 MIN 8.8 CFSM 1.33 IN 18.14

01610000 POTOMAC RIVER AT PAW PAW, WV

LOCATION.--Lat 39°32'13", long 78°27'28", Allegany County, Md., Hydrologic Unit 02070003, on left bank 250 ft (76 m) upstream from bridge on Maryland State Highway 51 at Paw Paw, 3.3 mi (5.3 km) downstream from Little Cacapon River, and at mile 277 (446 km).

DRAINAGE AREA.--3,109 mi² (8,052 km²).

PERIOD OF RECORD.--October 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 487.88 ft (148.706 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 25, 1939, nonrecording gage at bridge 250 ft (76 m) downstream at same datum.

REMARKS.--Records good except those for winter periods, which are fair. Low flow affected by Stony River Reservoir (see station 01595200), and since December 1950, by Savage River Reservoir (see station 01597500). Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--42 years, 3,278 ft³/s (92.83 m³/s), 14.32 in/yr (364 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 111,000 ft³/s (3,140 m³/s) Oct. 16, 1942, gage height, 38.36 ft (11.692 m); minimum, 164 ft³/s (4.64 m³/s) Sept. 10, 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 54.0 ft (16.46 m) Mar. 18, 1936, discharge, 240,000 ft³/s (6,800 m³/s), from rating curve extended above 85,000 ft³/s (2,410 m³/s) on basis of slope-area measurement of peak flow at site 5.0 mi (8.0 km) upstream at Okonoko, W. Va.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft³/s (560 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 11	0015	28700	813	18.58	5.663	Apr. 10	0715	25000	708	17.35	5.288
Mar. 18	2330	20000	566	15.54	4.737	May 1	1115	*37000	1050	21.26	6.480
Apr. 1	1115	24600	697	17.19	5.240	May 22	0100	30700	869	19.25	5.867

Minimum discharge, 470 ft³/s (13.3 m³/s) Sept. 21, 22, gage height, 3.54 ft (1.079 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 to SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2350	1800	4010	3740	1600	3100	23000	32300	4390	889	1200	791
2	2220	3250	3470	3410	1600	2490	17100	19300	3670	907	1010	737
3	5850	14200	3090	3070	1500	2260	11900	12400	3410	880	1300	715
4	9330	12100	2830	2730	1350	2620	9950	9260	3550	972	1080	668
5	8430	8020	2760	2540	1350	2790	8810	7250	3870	1120	918	807
6	14500	6450	2600	2350	1450	3980	7240	6090	3030	1020	863	1130
7	11200	5590	2420	2290	1400	6080	6210	5400	2870	862	1010	981
8	8130	4940	2320	2200	1350	5090	5540	4890	2990	1900	901	772
9	7920	4190	2170	2190	1300	5850	12600	4320	3270	7310	823	677
10	19500	3770	1980	1960	1250	6000	22100	3850	3140	4410	741	643
11	23800	3530	1860	1900	1200	5520	15000	3440	4030	3010	826	594
12	16100	3400	1860	2230	1200	5070	10500	3170	3690	2540	973	558
13	13600	3330	2040	3270	1100	4420	8380	3280	2920	2100	1050	538
14	11500	3610	3180	5010	1050	4220	8220	3220	2450	2570	984	520
15	8970	3530	3530	14100	1100	3840	14400	2910	2110	1810	836	508
16	7240	3280	3190	11100	1150	4300	15600	2560	2760	1410	856	502
17	6100	3160	2970	8420	1200	7160	11100	2300	6140	1190	1640	488
18	5010	2990	2830	7030	1200	15600	8810	2420	4000	1060	1950	487
19	4250	2780	2770	8520	1250	17100	7060	2790	3020	986	6280	495
20	3740	2590	2480	9890	1250	12000	5990	3200	2620	936	5200	482
21	3340	2430	2230	7970	1470	10900	5280	15800	2240	838	3470	473
22	3010	2280	2080	6080	2040	13400	4690	24000	1940	1470	2710	496
23	2750	2160	2000	5270	6070	11100	4220	12800	1700	1370	2270	508
24	2770	2070	1990	4680	7410	8860	3870	8880	1510	1820	1940	512
25	2520	2060	5860	4100	7080	7800	3570	8870	1310	1780	1640	516
26	2310	4200	11200	3980	5540	6940	3320	8130	1180	1330	1430	556
27	2220	9250	8270	3690	4950	5920	4840	5940	1100	1120	1240	511
28	2220	7720	6510	3640	4260	5180	11600	4700	1030	957	1110	495
29	2240	5820	5310	2800	3720	10000	9480	3960	966	1780	974	514
30	2200	4780	4610	2000	---	12600	11700	3440	939	2270	886	496
31	1940	---	4160	1700	---	13400	---	4060	---	1570	821	---
TOTAL	217260	139280	108580	143860	68390	225590	292100	234930	81845	54187	48932	18170
MEAN	7008	4643	3503	4641	2358	7277	9737	7578	2728	1748	1578	606
MAX	23800	14200	11200	14100	7410	17100	23000	32300	6140	7310	6280	1130
MIN	1940	1800	1860	1700	1050	2260	3320	2300	939	838	741	473

CAL YR 1979 TOTAL 1950166 MEAN 5343 MAX 59700 MIN 724 CFSM 1.72 IN 23.33
WTR YR 1980 TOTAL 1633124 MEAN 4462 MAX 32300 MIN 473 CFSM 1.44 IN 19.54

01613000 POTOMAC RIVER AT HANCOCK, MD

LOCATION.--Lat 39°41'49", long 78°10'39", Washington County, Hydrologic Unit 02070004, on left bank 0.2 mi (0.3 km) downstream from Little Tonoloway Creek, 0.5 mi (0.8 km) downstream from bridge on U.S. Highway 522 at Hancock, 1.1 mi (1.8 km) upstream from Tonoloway Creek (formerly called Great or Big Tonoloway Creek), and at mile 239 (385 km).

DRAINAGE AREA.--4,073 mi^2 (10,549 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1932 to current year. Gage-height records collected at same site since June 1925 are contained in reports of U.S. Weather Service.

REVISED RECORDS.--WSP 781: 1933(M). WSP 801: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 383.68 ft (116.946 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1932, to Jan. 5, 1935, Mar. 18, 1936, to Jan. 20, 1937, nonrecording gage, on former highway bridge just upstream at same datum.

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Slight regulation at low flow from power plants upstream. Low flow affected slightly by Stony River Reservoir (see station 01595200) and since December 1950, by Savage River Reservoir (see station 01597500). Gage-height telemeter at station.

AVERAGE DISCHARGE.--48 years, 4,153 ft^3/s (117.6 m^3/s), 13.85 in/yr (352 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 340,000 ft^3/s (9,630 m^3/s) Mar. 18, 1936, gage height, 47.6 ft (14.508 m), from rating curve extended above 120,000 ft^3/s (3,400 m^3/s) on basis of slope-area measurement of peak flow; minimum observed, 180 ft^3/s (5.10 m^3/s) Oct. 4, 1932, gage height, 2.01 ft (0.613 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1932, about 40 ft (12.2 m) in May 1889, discharge, about 220,000 ft^3/s (6,230 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 23,000 ft^3/s (650 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 6	1515	24100	683	13.46	4.103	Apr. 1	1830	29700	841	15.09	4.599
Oct. 11	0645	36200	1020	16.80	5.121	Apr. 10	1615	26400	748	14.15	4.313
Nov. 3	1900	25900	733	14.00	4.267	May 1	1745	*43800	1240	18.67	5.691
Mar. 19	0745	23200	657	13.17	4.014	May 22	0800	36900	1040	16.99	5.179

Minimum discharge, 543 ft^3/s (15.4 m^3/s) Sept. 22, gage height, 2.72 ft (0.829 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2970	2340	5920	4960	2400	3890	26600	35300	4890	1070	2030	1140
2	2870	2410	4940	4450	2400	3290	24000	29600	4780	1020	1630	1080
3	5900	16300	4310	4060	2250	2780	16800	18400	4210	1030	1370	1040
4	13800	21100	3810	3670	2050	2710	12800	13200	3930	1010	1340	990
5	11000	13000	3550	3320	2050	3200	11500	10100	4160	1160	1320	962
6	20600	9440	3440	3080	2200	3430	9550	8450	4080	1320	1210	935
7	17900	7960	3220	2880	2100	6070	8040	7230	3410	1220	1110	976
8	11900	6810	3020	2810	2000	6850	7050	6470	3310	1300	1090	1010
9	9530	5980	2850	2750	1950	6300	7980	5720	3380	3770	1070	959
10	16900	5070	2640	2670	1900	7130	23300	5030	3630	6690	1020	901
11	32900	4710	2430	2420	1800	6610	19500	4510	3600	4730	965	822
12	22900	4420	2290	2400	1800	6160	14000	4090	4280	3350	930	755
13	17400	4260	2360	3200	1650	5480	10600	4000	3920	2780	974	695
14	14900	4250	2910	4250	1550	4970	9410	4130	3270	2410	1030	652
15	11900	4480	4070	14900	1650	4760	13300	3860	2750	2580	1080	611
16	9450	4210	4200	18600	1750	4580	20100	3390	2470	1960	1030	583
17	7920	3990	3780	12800	1820	6400	14800	3020	3620	1560	1000	569
18	6730	3830	3470	10100	1770	15600	11400	2900	5760	1330	1390	566
19	5520	3600	3350	9620	1790	22000	9400	3250	4400	1180	2060	552
20	4790	3340	3260	13200	1710	16100	7800	3830	3400	1100	5070	552
21	4250	3120	2900	11100	1710	13500	6800	9630	2890	1050	5450	552
22	3820	2940	2670	8750	1910	17400	6010	32900	2480	1010	4320	545
23	3500	2800	2520	7240	3080	15900	5350	19700	2160	1560	3540	564
24	3380	2640	2450	6360	7270	12100	4870	12700	1890	1610	3050	586
25	3440	2580	3530	5590	7860	10200	4450	13300	1690	1940	2670	581
26	3130	2930	14000	5010	6990	9030	4150	11400	1490	2000	2280	586
27	2830	10900	12700	4840	5810	7890	4260	8970	1350	1630	1940	586
28	2750	12600	9390	4380	5220	6700	10900	6900	1250	1360	1680	586
29	2730	9200	7620	4200	4430	8150	13700	5560	1180	1300	1500	575
30	2740	7200	6290	3000	---	16600	11500	4690	1140	1870	1350	574
31	2600	---	5530	2600	---	15000	---	4170	---	2420	1230	---
TOTAL	282950	188410	139420	189210	82870	270780	349920	306400	94770	60320	57729	22085
MEAN	9127	6280	4497	6104	2858	8735	11660	9884	3159	1946	1862	736
MAX	32900	21100	14000	18600	7860	22000	26600	35300	5760	6690	5450	1140
MIN	2600	2340	2290	2400	1550	2710	4150	2900	1140	1010	930	545
CFSM	2.24	1.54	1.10	1.50	.70	2.15	2.86	2.43	.78	.48	.46	.18
IN.	2.58	1.72	1.27	1.73	.76	2.47	3.20	2.80	.87	.55	.53	.20

CAL YR 1979 TOTAL 2467072 MEAN 6759 MAX 71500 MIN 840 CFSM 1.66 IN 22.53
WTR YR 1980 TOTAL 2044864 MEAN 5587 MAX 35300 MIN 545 CFSM 1.37 IN 18.68

01613000 POTOMAC RIVER AT HANCOCK, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-72, 1976 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
JUN 13...	1500	3800	225	7.7	27.0	20.3	0	9.7	90	49	27	5.5

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
JUN 13...	6.0	12	.3	1.4	41	45	7.7	.1	3.3	141	121

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUN 13...	.19	1450	.46	.020	.06	440	410	30	70	50	20

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD

LOCATION.--Lat 39°42'57", long 77°49'28", Washington County, Hydrologic Unit 02070004, on right bank 0.7 mi (1.1 km) upstream from highway bridge in Fairview, 2.0 mi (3.2 km) upstream from Rockdale Run, 6.5 mi (10.5 km) northwest of Hagerstown, and 19.1 mi (30.7 km) upstream from mouth.

DRAINAGE AREA.--494 mi^2 (1,279 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1928 to current year.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1432: 1929(M), 1930, 1931-32(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 391.85 ft (119.436 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 6, 1932, nonrecording gage at highway bridge 0.7 mi (1.1 km) downstream at datum 2.93 ft (0.893 m) lower. Dec. 6, 1932, to Oct. 7, 1933, nonrecording gage 150 ft (46 m) downstream from former site at datum 4.92 ft (1.500 m) lower than present datum.

REMARKS.--Water-discharge records good. Low flow partly regulated by small powerplants near Mercersburg, Pa.

AVERAGE DISCHARGE.--52 years, 595 ft^3/s (16.85 m^3/s), 16.36 in/yr (416 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft^3/s (918 m^3/s) June 23, 1972, gage height, 24.5 ft (7.47 m), from floodmark, from rating curve extended above 15,000 ft^3/s (425 m^3/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 21 ft^3/s (0.59 m^3/s) Aug. 8, Sept. 12, 1966; minimum daily, 25 ft^3/s (0.71 m^3/s) Nov. 28, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1928, about 16.5 ft (5.03 m), present datum, sometime in 1889, from information by local residents; discharge, about 22,000 ft^3/s (620 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,300 ft^3/s (120 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 4	0045	*5740	163	8.73	2.661	Apr. 1	0515	5220	148	8.32	2.536
Dec. 26	0600	4600	130	7.78	2.371	Apr. 15	0515	4420	125	7.61	2.320
Mar. 22	1030	5690	161	8.69	2.649						

Minimum discharge, 91 ft^3/s (2.58 m^3/s) Sept. 28, gage height 1.32 ft (0.402 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	769	537	880	808	310	190	4740	1410	580	250	164	157
2	959	809	798	743	270	200	2970	1240	559	213	153	144
3	4110	2690	716	685	270	210	2220	1090	638	206	136	151
4	3900	1880	672	640	280	230	1880	989	526	200	136	142
5	2470	1370	640	608	270	260	1620	881	465	192	134	173
6	3200	1180	613	562	270	296	1340	808	424	188	130	221
7	2040	1050	582	538	260	276	1180	752	488	177	128	192
8	1680	934	542	513	260	277	1060	694	504	192	122	151
9	1510	857	504	495	250	392	1870	646	513	238	122	138
10	1520	836	472	430	250	381	2400	601	443	222	124	138
11	1390	813	458	440	240	359	1680	569	412	196	251	126
12	1280	767	445	509	240	315	1410	597	367	181	277	116
13	1260	705	513	485	230	304	1300	1120	340	171	284	112
14	1080	669	844	476	230	301	1650	967	322	167	192	111
15	959	616	634	922	230	325	3740	769	313	162	171	109
16	863	585	567	898	230	438	2340	668	374	160	185	109
17	801	555	533	787	220	867	1720	607	418	158	173	111
18	770	528	467	738	220	2220	1450	678	331	168	162	112
19	693	506	472	765	220	1620	1270	700	301	158	166	114
20	647	485	449	694	230	1190	1120	674	289	149	160	111
21	611	464	423	640	240	2620	1010	2230	270	142	168	107
22	583	444	415	603	260	5080	904	2450	255	155	164	107
23	606	433	410	592	471	2540	841	1490	245	230	151	102
24	1280	430	423	500	416	1840	763	1210	238	180	142	102
25	940	450	2230	490	374	1890	736	1320	231	160	138	102
26	782	1070	3510	470	345	1500	687	1040	224	151	132	98
27	702	2370	1770	440	302	1260	793	860	217	142	128	96
28	680	1530	1350	420	270	1110	930	755	209	140	126	94
29	714	1200	1130	400	240	2510	1490	679	228	166	124	94
30	626	1010	999	350	---	2280	1390	618	265	216	124	96
31	571	---	895	340	---	2530	---	574	---	178	149	---
TOTAL	39996	27773	25356	17981	7898	35811	48524	29686	10989	5608	4916	3736
MEAN	1290	926	818	580	272	1155	1617	958	366	181	159	125
MAX	4110	2690	3510	922	471	5080	4740	2450	638	250	284	221
MIN	571	430	410	340	220	190	687	569	209	140	122	94
CFSM	2.61	1.87	1.66	1.17	.55	2.34	3.27	1.94	.74	.37	.32	.25
IN.	3.01	2.09	1.91	1.35	.59	2.70	3.65	2.24	.83	.42	.37	.28

CAL YR 1979 TOTAL 361995 MEAN 992 MAX 11200 MIN 194 CFSM 2.01 IN 27.26
WTR YR 1980 TOTAL 258274 MEAN 706 MAX 5080 MIN 94 CFSM 1.43 IN 19.45

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1966 to September 1980 (discontinued).
SUSPENDED SEDIMENT DISCHARGE: October 1966 to September 1980 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum daily, 30.0°C July 17, 1969; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,050 mg/L Oct. 25, 1971; minimum daily mean, 1 mg/L on many days.
SEDIMENT LOADS: Maximum daily, 73,000 tons (66,200 tonnes) June 23, 1972; minimum daily, 0.17 ton (0.15 tonne) Nov. 24, 26, 27, 1966.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum daily, 26.0°C July 20, 21, Aug. 6, 9, 10, minimum daily, 2.0°C Mar. 1.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 349 mg/L Mar. 18; minimum daily mean, 1 mg/L on many days.
SEDIMENT LOADS: Maximum daily, 3,820 tons (3,470 tonnes) Mar. 22; minimum daily, 0.63 ton (0.57 tonne) Feb. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
JUN 13...	1200	340	345	8.3	22.0	17.1	8	14.5	160	19	47	10

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
JUN 13...	6.5	8	.2	2.0	140	18	10	.1	1.9	214	180

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUN 13...	.29	196	3.1	.090	.28	300	280	20	20	20	3

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM
OCT											
03...	0920	5850	17.0	539	9970	64	79	89	91	99	100

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	9.0	6.0	7.0	5.0	2.0	7.0	10.0	19.0	20.0	24.0	24.0
2	16.0	12.0	7.0	5.0	5.0	4.0	9.0	13.5	20.5	20.5	23.0	24.0
3	17.0	11.0	6.0	5.0	4.0	4.0	9.0	14.5	19.0	21.5	25.0	24.0
4	16.0	12.0	7.0	5.0	4.0	4.0	11.0	15.5	18.5	21.0	25.0	23.0
5	15.0	10.0	6.0	4.0	7.0	5.0	9.0	15.5	16.0	22.0	25.0	23.0
6	13.0	9.0	6.0	4.0	5.0	5.0	10.0	16.0	16.0	22.0	26.0	23.0
7	13.0	8.0	6.0	4.0	4.0	5.0	11.0	16.0	16.5	20.0	25.0	23.0
8	12.0	10.0	7.0	5.0	4.0	8.0	11.0	14.5	20.0	20.5	24.0	21.0
9	14.0	9.0	7.0	6.0	5.0	9.0	13.0	12.0	15.5	19.0	26.0	21.0
10	12.0	11.0	5.0	3.0	5.0	7.0	11.0	10.5	14.5	20.5	26.0	22.0
11	11.0	11.0	5.0	4.0	5.0	7.0	10.0	13.5	15.0	20.5	25.0	19.0
12	12.0	10.0	7.0	5.0	5.0	4.0	11.0	14.5	14.5	22.0	24.0	18.0
13	12.0	9.0	9.0	6.0	4.0	5.0	11.0	16.0	15.0	21.5	23.0	19.0
14	10.0	9.0	7.0	5.0	4.0	5.0	10.0	16.5	16.0	20.5	23.0	20.0
15	10.0	8.0	5.0	6.0	6.0	5.0	10.0	14.5	19.0	---	24.0	22.0
16	10.0	9.0	6.0	6.0	5.0	7.0	9.0	13.5	18.5	24.0	22.0	19.0
17	11.0	8.0	5.0	6.0	4.0	8.0	9.0	14.5	16.5	25.0	20.0	19.0
18	12.0	9.0	5.0	7.0	4.0	6.0	10.0	15.5	16.5	24.0	20.0	20.0
19	12.0	9.0	4.0	8.0	4.0	6.0	11.5	15.5	17.0	25.0	20.0	18.0
20	13.0	10.0	5.0	7.0	5.0	9.0	12.0	15.5	18.5	26.0	21.0	19.0
21	15.0	9.0	5.0	5.0	5.0	10.0	14.5	14.5	18.5	26.0	21.0	20.0
22	14.0	10.0	6.0	8.0	6.0	5.0	13.0	15.0	18.5	25.0	21.0	22.0
23	15.0	10.0	6.0	9.0	6.0	7.0	14.0	15.5	18.5	24.0	21.0	23.0
24	12.0	12.0	7.0	4.0	6.0	8.0	14.0	16.5	20.0	22.0	22.0	20.0
25	11.0	13.0	10.0	5.0	7.0	9.0	14.5	16.5	20.0	22.0	22.0	20.0
26	9.0	13.0	7.0	7.0	7.0	6.0	13.0	15.5	20.0	22.0	22.0	18.0
27	7.0	12.0	8.0	6.0	5.0	6.0	11.0	15.5	21.0	24.0	23.0	15.0
28	9.0	10.0	6.0	5.0	4.0	7.0	11.0	14.5	21.0	24.0	24.0	14.0
29	10.0	10.0	6.0	6.0	3.0	8.0	11.5	16.5	23.0	24.0	23.0	15.0
30	9.0	7.0	7.0	5.0	---	8.0	13.0	18.5	21.0	23.0	24.0	16.0
31	10.0	---	7.0	6.0	---	9.0	---	18.5	---	23.0	24.0	---

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	40	83	3	4.3	9	12	3	6.5	1	.91	4	2.3
2	65	119	12	41	7	15	3	6.0	1	.77	5	3.0
3	341	3420	137	1050	5	9.7	2	3.7	1	.96	4	2.6
4	88	1000	45	228	6	11	2	3.5	1	1.0	5	3.5
5	66	455	25	92	5	8.6	2	3.3	1	.96	2	1.5
6	80	691	13	41	5	8.3	2	3.0	2	1.9	1	.80
7	30	165	11	20	6	9.4	1	1.5	2	1.8	1	.75
8	21	95	8	17	6	8.8	1	1.4	1	.87	3	2.2
9	19	77	9	21	5	6.8	1	1.3	1	.82	5	5.3
10	20	82	13	29	3	3.8	1	1.2	1	.78	11	11
11	15	54	11	24	2	2.5	1	1.2	1	.76	4	3.9
12	16	46	8	17	3	3.6	1	1.4	1	.75	4	3.4
13	18	58	7	13	5	6.9	1	1.3	1	.72	3	2.5
14	12	23	7	13	11	25	2	2.6	1	.74	6	4.9
15	9	18	6	10	6	10	18	45	1	.72	5	4.4
16	9	21	5	7.9	2	3.1	11	27	1	.72	9	11
17	7	15	5	7.5	1	1.4	7	15	1	.68	114	333
18	9	18	5	7.1	1	1.3	6	12	1	.63	349	2090
19	12	22	5	6.8	1	1.3	7	14	1	.67	85	372
20	11	19	4	5.2	1	1.2	5	9.4	1	.68	30	96
21	8	13	3	3.8	1	1.1	2	3.5	1	.69	167	1840
22	9	14	4	4.8	1	1.1	1	1.6	1	.82	277	3820
23	11	18	4	4.7	1	1.1	2	3.1	2	2.5	105	720
24	55	163	6	7.0	1	1.1	1	1.4	1	1.1	75	373
25	19	40	8	9.7	31	312	1	1.4	1	1.0	65	332
26	12	25	24	123	130	1330	1	1.3	1	.93	30	121
27	7	13	135	972	32	141	1	1.2	1	.82	21	71
28	5	9.2	36	149	13	47	1	1.2	1	.73	25	75
29	7	13	18	52	7	21	1	1.1	1	.73	173	1260
30	5	8.5	12	21	5	13	1	.99	---	---	70	431
31	4	6.2	---	---	3	7.2	1	1.0	---	---	58	447
TOTAL	---	6803.9	---	3001.8	---	2025.3	---	178.09	---	27.16	---	12444.05
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	158	2030	43	164	17	27	32	22	23	10	4	1.8
2	70	561	35	117	19	29	22	13	21	9.1	9	3.7
3	45	270	28	82	25	43	21	12	14	5.3	14	6.0
4	37	188	27	72	19	27	21	11	17	6.5	5	2.0
5	34	149	28	67	16	20	19	9.8	12	4.5	22	11
6	21	76	27	59	16	18	19	9.6	11	4.0	12	7.5
7	19	61	23	47	23	30	17	8.1	11	4.0	16	8.6
8	20	57	21	39	49	67	21	11	5	1.8	9	3.9
9	51	300	17	30	36	50	34	22	3	1.0	8	3.2
10	100	668	15	24	31	37	61	37	6	2.2	8	3.2
11	37	168	16	25	22	24	42	22	29	21	6	2.9
12	23	88	21	34	21	21	30	15	45	35	4	1.4
13	20	70	89	269	21	19	18	8.3	35	28	5	1.6
14	34	189	78	204	19	17	19	8.6	19	10	9	2.9
15	138	1450	30	62	18	15	19	8.3	17	8.2	6	1.9
16	50	346	22	40	30	30	19	8.2	13	6.8	6	1.9
17	27	120	19	31	33	37	14	6.0	10	4.9	7	2.2
18	23	90	20	37	27	24	20	9.1	10	4.6	10	3.3
19	21	72	29	55	28	23	19	8.1	12	5.6	11	3.6
20	22	67	33	60	27	21	14	5.6	13	5.9	4	1.3
21	16	44	120	881	22	16	16	6.2	18	8.7	4	1.2
22	13	32	116	801	21	14	22	9.3	25	12	5	1.6
23	10	23	59	237	29	19	27	17	9	3.9	4	1.2
24	11	23	44	144	32	21	26	13	6	2.4	5	1.5
25	11	22	64	228	33	21	22	9.6	8	3.2	5	1.5
26	9	17	45	126	33	20	19	7.9	4	1.5	9	2.6
27	12	26	27	63	33	19	14	5.6	4	1.5	5	1.4
28	42	105	25	51	31	17	16	6.3	3	1.1	4	1.1
29	86	346	26	48	24	15	27	12	2	.71	4	1.1
30	43	161	23	38	31	22	30	18	4	1.4	5	1.4
31	---	---	21	33	---	---	25	12	4	1.7	---	---
TOTAL	---	7819	---	4168	---	763	---	371.6	---	216.51	---	88.5

TOTAL LOAD FOR YEAR: 37906.91 TONS.

01617800 MARSH RUN AT GRIMES, MD

LOCATION.--Lat 39°30'53", long 77°46'38", Washington County, Hydrologic Unit 02070004, on right bank 220 ft (67 m) upstream from bridge on Sprecher Road, 0.1 mi (0.2 km) downstream from unnamed tributary, 0.5 mi (0.8 km) southwest of Grimes, 1.5 mi (2.4 km) upstream from mouth, and 2.2 mi (3.5 km) southwest of Fairplay.

DRAINAGE AREA.--18.9 mi^2 (49.0 km^2).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 354.72 ft (108.119 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, May 27 to Aug. 14, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 13.5 ft^3/s (0.382 m^3/s), 9.70 in/yr (246 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 450 ft^3/s (12.7 m^3/s) Feb. 26, 1979, gage height, 4.41 ft (1.344 m); no flow Oct. 1, 1977, result of regulation caused by construction work above station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 55 ft^3/s (1.56 m^3/s) May 21, gage height, 1.87 ft (0.570 m), no peak above base of 60 ft^3/s (1.7 m^3/s); minimum, 3.5 ft^3/s (0.099 m^3/s) Sept. 19, 20, 21, 24, 25, 27, 28, 29, 30, gage height, 0.95 ft (0.290 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	17	15	13	12	9.3	35	23	14	7.4	4.9	4.2
2	16	22	15	12	12	9.2	28	21	14	7.3	4.9	4.3
3	36	31	14	12	12	9.0	25	20	14	7.2	4.9	4.8
4	24	23	16	12	11	9.0	25	19	13	7.0	4.9	4.7
5	30	20	16	13	11	10	22	17	13	7.0	4.8	4.6
6	34	19	16	12	10	10	21	16	12	6.8	4.8	4.6
7	24	18	15	12	10	9.9	21	18	12	6.7	4.8	4.5
8	21	18	14	12	10	10	20	16	12	6.7	4.8	4.6
9	30	18	14	12	10	9.9	29	15	12	6.9	5.1	4.3
10	45	18	14	12	10	9.5	24	15	11	7.3	5.4	4.9
11	37	18	14	12	9.9	9.1	22	15	11	6.8	7.7	4.3
12	31	20	14	14	9.8	8.7	21	15	11	6.7	8.6	4.1
13	30	19	16	12	9.6	9.5	22	17	10	6.5	6.8	4.0
14	26	18	15	14	9.7	10	24	15	10	6.4	6.3	4.0
15	25	18	14	19	9.9	9.9	26	14	9.9	6.1	6.6	4.0
16	23	18	14	16	9.6	12	22	14	9.9	6.0	7.0	3.9
17	22	17	13	15	9.6	16	21	14	9.9	5.9	6.0	3.9
18	21	17	13	15	9.5	16	21	19	9.8	5.9	6.5	3.9
19	19	16	14	18	9.7	14	20	17	9.5	5.6	6.4	3.7
20	19	15	12	16	9.9	13	20	16	9.2	5.5	6.2	3.6
21	19	15	12	16	9.9	22	19	42	8.8	5.8	6.0	3.6
22	20	15	12	15	12	25	19	28	8.6	6.4	5.9	3.9
23	21	14	12	15	12	20	19	23	8.4	6.8	5.4	4.2
24	25	14	12	15	12	19	18	21	8.4	6.0	5.0	3.6
25	21	15	24	15	11	19	17	19	8.2	5.6	4.7	3.9
26	19	19	20	14	11	17	18	17	7.8	5.4	4.5	3.9
27	18	20	16	14	10	16	23	17	7.8	5.2	4.4	3.6
28	18	17	15	14	10	16	23	16	7.7	5.2	4.2	3.5
29	18	16	15	13	9.9	29	25	15	7.7	5.3	4.2	3.5
30	17	15	14	12	---	24	21	15	8.0	5.0	4.2	3.5
31	17	---	13	12	---	26	---	14	---	5.0	4.2	---
TOTAL	743	540	453	428	303.0	447.0	671	563	308.6	193.4	170.1	122.1
MEAN	24.0	18.0	14.6	13.8	10.4	14.4	22.4	18.2	10.3	6.24	5.49	4.07
MAX	45	31	24	19	12	29	35	42	14	7.4	8.6	4.9
MIN	16	14	12	12	9.5	8.7	17	14	7.7	5.0	4.2	3.5
CFSM	1.27	.95	.77	.73	.55	.76	1.19	.96	.55	.33	.29	.22
IN.	1.46	1.06	.89	.84	.60	.88	1.32	1.11	.61	.38	.33	.24

CAL YR 1979 TOTAL 7012.8 MEAN 19.2 MAX 145 MIN 3.6 CFSM 1.02 IN 13.80
WTR YR 1980 TOTAL 4942.2 MEAN 13.5 MAX 45 MIN 3.5 CFSM .71 IN 9.73

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV

LOCATION.--Lat 39°26'04", long 77°48'07", Jefferson County, Hydrologic Unit 02070004, on right bank 0.1 mi (0.2 km) downstream from Rumsey Bridge at Shepherdstown, 3.3 mi (5.3 km) upstream from Antietam Creek, and at mile 184 (296 km).

DRAINAGE AREA.--5,936 mi² (15,374 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to September 1953. Annual maximums, water years 1954-64. July 1964 to current year. Gage-height record and estimated discharges October 1953 to June 1964 available in files of Maryland district office.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 281.00 ft (85.649 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Some regulation at low flow by power plants above station, Stony River Reservoir (see station 01595200), and since December 1950 by Savage River Reservoir (see station 01597500). Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--41 years (water years 1929-53, 1965-80), 6,147 ft³/s (174.1 m³/s), 14.06 in/yr (357 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 335,000 ft³/s (9,490 m³/s) Mar. 19, 1936, gage height, 42.1 ft (12.83 m), from floodmarks, from rating curve extended above 200,000 ft³/s (5,660 m³/s) on basis of slope-area measurement of peak flow; minimum, 170 ft³/s (4.81 m³/s) Aug. 1, 1966; minimum daily, 185 ft³/s (5.24 m³/s) July 31, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in June 1889 and May 1924 reached stages of 39.2 ft (11.95 m) and 29.8 ft (9.08 m) respectively, from floodmarks, discharges, about 290,000 ft³/s (8,210 m³/s) and 168,000 ft³/s (4,760 m³/s) respectively, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 23,000 ft³/s (650 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 4	1130	29600	838	10.33	3.149	Mar. 22	1830	31700	898	10.78	3.286
Oct. 6	2300	35800	1010	11.63	3.545	Apr. 1	2400	43200	1220	13.12	3.999
Oct. 11	1600	47200	1340	13.88	4.231	Apr. 11	0030	32600	923	10.96	3.341
Nov. 4	0430	36200	1020	11.71	3.569	Apr. 16	1600	29900	847	10.39	3.167
Nov. 28	0200	23600	668	8.98	2.737	May 2	0330	*50900	1440	14.57	4.441
Dec. 26	2230	25100	711	9.34	2.847	May 22	1600	47200	1340	13.89	4.234
Mar. 19	1630	29700	841	10.35	3.155						

Minimum discharge, 629 ft³/s (17.8 m³/s) Sept. 17, gage height, 1.59 ft (0.485 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4900	4020	9380	7750	3800	5010	35400	29900	5970	1920	3240	1330
2	5990	3890	7900	7030	3700	4350	38800	44900	6620	1780	2540	1280
3	10700	14000	6790	6410	3500	3810	27700	28200	5970	1700	2070	1250
4	26500	33500	6020	6010	3200	3600	20700	19900	5580	1680	1640	1330
5	19800	22500	5480	5710	3170	4240	17500	15200	5180	1660	1770	1190
6	27900	15300	5270	5420	3390	4700	15000	12300	5490	1750	1720	1250
7	30400	12200	5100	4650	3300	5740	12500	10400	4830	1870	1510	1260
8	20200	10400	4680	4370	3200	8930	10900	9100	4520	1800	1390	1550
9	15300	9020	4390	4260	3100	7930	10400	8190	4490	3170	1400	1540
10	18100	7980	4120	4040	3000	8380	23000	7260	4640	8940	1390	1340
11	41400	7240	3860	3810	2800	8530	28900	6540	4640	6470	1440	1280
12	35100	6800	3660	3840	2800	7710	21000	5960	4930	4460	1380	1040
13	25000	6460	3650	4280	2600	7280	16000	5830	5560	3660	1600	918
14	20800	6200	4440	7500	2500	6560	13700	7090	4260	3210	1630	858
15	17200	6270	5790	25000	2600	6240	19800	6230	3740	2980	1650	867
16	13900	6200	6190	30000	2700	6370	27700	5490	4170	2880	1690	801
17	11600	5760	5800	21000	2740	8270	23700	4830	3690	2360	1490	665
18	9890	5500	5500	16000	2660	17700	17800	4680	7620	2050	1500	877
19	8380	5270	5200	18000	2530	28300	14600	5000	5890	1830	2180	889
20	7150	4890	4410	21000	2670	24000	12100	5400	4580	1680	4890	855
21	6400	4630	4990	18000	2640	19100	10300	9180	3880	1690	6650	849
22	5790	4360	4300	14000	2890	28900	9180	39900	3410	1910	4880	846
23	5370	4140	4000	12000	3320	26700	8140	32900	3040	2870	3660	867
24	5850	3980	3900	9500	6920	19800	7360	20000	2770	3330	3120	859
25	6320	3870	5650	8030	9550	16200	6790	17800	2520	2440	2690	900
26	5580	4300	18800	[illegible]	9080	14200	6280	18600	2310	2850	2370	960
27	4980	15500	21600	6690	7440	12200	6210	13800	2100	2440	2080	946
28	4630	21000	16000	6320	6590	10500	9640	10400	1950	2010	1860	822
29	4620	15400	12400	5830	5850	11900	19300	8190	1880	1860	1680	894
30	4520	11600	10200	5000	---	23000	17000	6910	1920	1940	1530	839
31	4340	---	8740	4200	---	22600	---	6020	---	3280	1400	---
TOTAL	428610	282180	218710	302860	114240	382750	507400	426100	128150	84470	70040	31152
MEAN	13830	9406	7055	9770	3939	12350	16910	13750	4272	2725	2259	1038
MAX	41400	33500	21600	30000	9550	28900	38800	44900	7620	8940	6650	1550
MIN	4340	3870	3650	3810	2500	3600	6210	4680	1880	1660	1380	665
CFSM	2.33	1.59	1.19	1.65	.66	2.08	2.85	2.32	.72	.46	.38	.18
IN.	2.69	1.77	1.37	1.90	.72	2.40	3.18	2.67	.80	.53	.44	.20

CAL YR 1979 TOTAL 3631720 MEAN 9950 MAX 103000 MIN 1470 CFSM 1.68 IN 22.76
WTR YR 1980 TOTAL 2976662 MEAN 8133 MAX 44900 MIN 665 CFSM 1.37 IN 18.65

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT 24...	1100	5690	280	8.0	8.0	16.0	1.0	9.4	140	230	150
NOV 28...	1330	20700	160	7.4	12.0	14.5	30	7.5	3000	14000	67
DEC 10...	1500	4100	280	7.9	11.0	5.0	2.0	13.4	180	K14	110
JAN 21...	1400	15400	165	7.4	6.0	4.0	1.8	12.7	170	290	72
FEB 20...	1300	2590	345	8.0	9.0	1.0	.80	--	K1	K3	140
MAR 20...	1400	23000	150	7.7	16.0	7.5	.45	12.4	320	110	64
APR 17...	1300	23300	160	7.2	12.0	9.5	10	11.4	1400	460	69
MAY 14...	1330	7410	252	7.4	19.5	18.0	1.8	9.8	41	46	110
JUN 17...	1315	3620	265	8.0	18.5	22.0	.20	9.5	56	K3	120
JUL 16...	1145	2890	282	8.2	34.0	27.0	6.0	7.4	62	350	110
AUG 12...	1230	1320	400	8.4	26.0	28.0	1.1	7.8	23	K10	170
SEP 23...	1400	810	450	8.2	28.0	23.0	.50	9.4	280	52	180

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 24...	19	43	10	9.4	16	.3	2.0	130	27	7.9	.1
NOV 28...	29	20	4.2	5.0	17	.3	2.2	38	27	6.4	.1
DEC 10...	39	35	6.1	6.2	13	.3	1.4	74	36	10	.0
JAN 21...	27	22	4.2	3.9	10	.2	1.2	45	24	5.8	.1
FEB 20...	45	43	7.8	10	13	.4	1.6	95	48	15	.1
MAR 20...	33	19	3.9	4.6	13	.3	1.4	31	25	6.4	.1
APR 17...	28	21	4.0	3.4	9	.2	1.4	41	23	4.3	.1
MAY 14...	41	34	6.7	6.1	10	.3	1.4	72	35	8.0	.1
JUN 17...	43	35	6.8	6.2	10	.3	1.6	72	40	8.4	.1
JUL 16...	44	35	6.4	6.0	10	.2	2.0	78	43	8.4	.1
AUG 12...	72	54	9.0	11	12	.4	2.4	100	59	14	.2
SEP 23...	76	54	10	15	15	.5	2.7	100	72	20	.2

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)
OCT											
24...	6.6	208	191	.28	3200	1.5	1.5	.04	.00	.05	.00
NOV											
28...	5.6	100	96	.14	5590	.64	.60	.02	.00	.02	.00
DEC											
10...	4.8	163	149	.22	1800	1.3	1.2	.06	.00	.07	.00
JAN											
21...	5.6	111	98	.15	4620	--	.89	--	.02	--	.03
FEB											
20...	3.3	205	191	.28	1430	1.2	1.2	.05	.05	.06	.06
MAR											
20...	6.0	99	90	.13	6150	1.1	1.1	.05	.05	.06	.06
APR											
17...	6.0	107	92	.15	6730	.96	.96	.05	.06	.06	.08
MAY											
14...	4.6	149	144	.20	2980	1.0	1.0	.03	.00	.04	.00
JUN											
17...	1.4	167	147	.23	1630	.95	.95	.02	.02	.02	.03
JUL											
16...	5.7	175	154	.24	1370	1.2	1.1	.04	.04	.05	.05
AUG											
12...	5.0	271	218	.37	96.6	.76	.80	.05	.07	.06	.09
SEP											
23...	3.0	270	241	.37	590	.78	.80	.02	.01	.02	.01

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT											
24...	.20	.20	.24	.04	.20	1.7	1.7	7.7	.070	.21	.060
NOV											
28...	.67	.38	.69	.31	.38	1.3	.98	5.9	.060	.18	.020
DEC											
10...	.11	.06	.17	.11	.06	1.5	1.3	6.5	.030	.09	.020
JAN											
21...	--	.20	--	--	.22	--	1.1	--	.020	.06	.020
FEB											
20...	.00	.00	.02	.01	.01	1.2	1.2	5.4	.030	.09	.030
MAR											
20...	.64	.21	.69	.43	.26	1.8	1.4	7.9	.090	.28	.010
APR											
17...	.52	.23	.57	.28	.29	1.5	1.3	6.8	.120	.37	.010
MAY											
14...	.25	.32	.29	.08	.32	1.3	1.3	5.7	.030	.09	.020
JUN											
17...	.26	.10	.28	.14	.12	1.2	1.1	5.4	.030	.09	.010
JUL											
16...	.25	.15	.29	.10	.19	1.5	1.3	6.6	.040	.12	.020
AUG											
12...	.32	.13	.37	.17	.20	1.1	1.0	5.0	.070	.21	.050
SEP											
23...	.28	--	.30	--	--	1.1	--	4.8	.050	.15	.020

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)
OCT											
24...	--	--	--	--	--	--	--	--	--	--	--
NOV											
28...	--	--	--	--	--	--	--	--	--	--	--
DEC											
10...	1	1	0	0	0	40	0	0	1	10	0
FEB											
20...	--	--	--	--	--	--	--	--	--	--	--
MAR											
20...	1	0	1	50	10	40	0	0	0	10	0
MAY											
14...	--	--	--	--	--	--	--	--	--	--	--
JUN											
17...	1	0	1	50	--	50	0	0	5	20	10
AUG											
12...	--	--	--	--	--	--	--	--	--	--	--
SEP											
23...	1	0	1	200	200	0	1	1	0	40	30

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)
OCT										
24...	--	--	--	--	--	--	--	--	--	20
NOV										
28...	--	--	--	--	--	--	--	--	--	--
DEC										
10...	10	0	0	1	2	1	1	150	110	40
FEB										
20...	--	--	--	--	--	--	--	--	--	--
MAR										
20...	10	3	3	0	11	9	2	1900	1900	20
MAY										
14...	--	--	--	--	--	--	--	--	--	--
JUN										
17...	10	0	0	0	3	0	3	400	390	10
AUG										
12...	--	--	--	--	--	--	--	--	--	--
SEP										
23...	10	2	2	0	5	3	2	180	170	10

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)
OCT										
24...	--	--	--	--	--	--	--	--	--	--
NOV										
28...	--	--	--	--	--	--	--	--	--	--
DEC										
10...	2	2	0	40	0	40	.1	.0	.1	3
FEB										
20...	--	--	--	--	--	--	--	--	--	--
MAR										
20...	3	1	2	160	140	20	.1	.0	.1	6
MAY										
14...	--	--	--	--	--	--	--	--	--	--
JUN										
17...	4	4	0	40	40	4	.1	--	.1	2
AUG										
12...	--	--	--	--	--	--	--	--	--	--
SEP										
23...	5	5	0	40	30	10	.1	--	.1	6

DATE	NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
24...	--	--	--	--	--	--	--	--	--	--
NOV										
28...	--	--	--	--	0	--	--	--	--	--
DEC										
10...	2	1	0	0	0	0	0	10	0	20
FEB										
20...	--	--	--	--	0	--	--	--	--	--
MAR										
20...	5	1	0	0	0	0	0	20	10	0
MAY										
14...	--	--	--	--	0	--	--	--	--	--
JUN										
17...	2	0	0	0	0	0	0	20	10	10
AUG										
12...	--	--	--	--	0	--	--	--	--	--
SEP										
23...	4	2	0	0	0	0	0	30	30	0

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	PHYTO-PLANK-TON, TOTAL (CELLS PER ML)
NOV				
28...	5.5	--	--	4100
DEC				
10...	--	2.0	.4	--
JAN				
21...	5.3	--	--	--
FEB				
20...	1.5	--	--	--
MAR				
20...	--	2.8	1.9	1200
APR				
17...	7.0	--	--	--

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	PHYTO-PLANK-TON, TOTAL (CELLS PER ML)
MAY				
14...	3.0	--	--	3500
JUN				
17...	--	2.5	.7	2500
JUL				
16...	4.8	--	--	--
AUG				
12...	6.4	--	--	36000
SEP				
23...	--	7.7	.8	28000

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT			
24...	9	138	96
NOV			
28...	76	4250	97
DEC			
10...	4	44	100
JAN			
21...	16	665	80
FEB			
20...	2	14	71

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR			
20...	81	5030	93
APR			
17...	123	7740	97
JUN			
17...	28	274	43
AUG			
12...	10	3.6	73
SEP			
23...	5	11	100

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

PHYTOPLANKTON ANALYSES, AUGUST 1979 TO SEPTEMBER 1979

DATE	SEP 5.79
TIME	1430
TOTAL CELLS/ML	3700
DIVERSITY: DIVISION	0.9
.CLASS	0.9
..ORDER	0.0
...FAMILY	0.0
....GENUS	0.0

ORGANISM	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)		
.CHLOROPHYCEAE		
..CHLOROCOCCALES		
...CHLOROCOCCACEAE		
....CHLOROCOCCUM	90	2
...OOCYSTACEAE		
....ANKISTRODESMUS	360	10
....CHLORELLA	54	1
....DICTYOSPHAERIUM	72	2
...SCENEDESMACEAE		
....ACTINASTRUM	72	2
....CRUCIGENIA	970#	26
....SCENEDESMUS	1200#	31
....TETRASTRUM	72	2
..VOLVOCALES		
...CHLAMYDOMONADACEAE		
....PLATYMONAS	*	0
..ZYGNEMATALES		
...DESMIDIACEAE	36	1
CHRYSOPHYTA		
.BACILLARIOPHYCEAE		
..CENTRALES		
...COSCINODISCACEAE		
....CYCLOTELLA	490	13
..PENNALES		
...ACHNANTHACEAE		
....ACHNANTHES	*	0
...FRAGILARIACEAE		
....SYNEDRA	54	1
...NAVICULACEAE		
....NAVICULA	72	2
...NITZSCHIACEAE		
....NITZSCHIA	72	2
CRYPTOPHYTA (CHYPTOMONADS)		
.CRYPTOPHYCEAE	36	1
CYANOPHYTA (BLUE-GREEN ALGAE)		
.CYANOPHYCEAE		
..CHROOCOCCALES		
...CHROOCOCCACEAE		
....ANACYSTIS	72	2

NOTE: # - DOMINANT ORGANISM; EQUAL TO OH GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	NOV 28,79	MAR 20,80	MAY 14,80	JUN 17,80
TIME	1330	1400	1330	1315
TOTAL CELLS/ML	4100	1200	3500	2500
DIVERSITY: DIVISION	0.9	0.9	1.1	1.3
.CLASS	0.9	0.9	1.1	1.3
..ORDER	1.2	1.2	1.5	1.5
...FAMILY	3.0	2.3	1.6	1.5
....GENUS	3.3	2.4	1.6	1.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	88	2	--	-	--	-	120	5
....CHLORELLA	--	-	--	-	--	-	23	1
....CHODATELLA	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	23	1
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	--	-
....SCENEDESMUS	--	-	--	-	--	-	93	4
..TETRASPORALES								
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	150	4	47	2
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	58	1	--	-	--	-	--	-
....STAURASTRUM	--	-	--	-	--	-	23	1
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	150	4	13	1	2400#	68	1700#	68
....MELOSIRA	58	1	52	4	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	29	1	--	-	--	-	--	-
....COCCONEIS	88	2	--	-	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	290	7	90	8	--	-	--	-
...DIATOMACEAE								
....DIATOMA	290	7	--	-	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	58	1	--	-	--	-	--	-
....FRAGILARIA	180	4	13	1	31	1	--	-
....SYNEDRA	180	4	26	2	--	-	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	260	6	26	2	--	-	--	-
...NAVICULACEAE								
....NAVICULA	1000#	25	440#	37	150	4	--	-
...NITZSCHIACEAE								
....NITZSCHIA	560	13	140	12	93	3	--	-
...SURIRELLACEAE								
....SURIRELLA	--	-	13	1	--	-	--	-

CONTINUED ...

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 28,79 1330		MAR 20,80 1400		MAY 14,80 1330		JUN 17,80 1315	
ORGANISM	CELLS /ML	PER-	CELLS /ML	PER-	CELLS /ML	PER-	CELLS /ML	PER-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	190	5	420#	17
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	*	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	500	14	70	3
..HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	360#	31	--	-	--	-
....SCHIZOTHRIX	820#	20	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	JUL 16,80		AUG 12,80		SEP 23,80	
TIME	1145		1230		1400	
TOTAL CELLS/ML	3800		36000		28000	
DIVERSITY: DIVISION	1.8		1.3		0.8	
.CLASS	1.8		1.3		0.8	
..ORDER	2.3		1.6		0.9	
...FAMILY	2.9		2.0		1.1	
....GENUS	3.3		2.3		1.2	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	1000	3	--	-
...COELASTRACEAE						
....COELASTRUM	--	-	2700	7	--	-
...MICRACTINIACEAE						
....GOLENKINIA	--	-	*	0	--	-
....MICRACTINIUM	90	2	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	660#	17	300	1	230	1
....CHLORELLA	--	-	--	-	--	-
....CHODATELLA	--	-	670	2	2300	8
....DICTYOSPHAERIUM	150	4	--	-	--	-
....KIRCHNERIELLA	150	4	*	0	--	-
....OOCYSTIS	--	-	300	1	--	-
....SELENASTRUM	--	-	370	1	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	240	6	--	-	--	-
....SCENEDESMUS	150	4	1200	3	2800	10
..TETRASPORALES						
...PALMELLACEAE						
....SPHAEROCYSTIS	--	-	3600	10	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	210	5	--	-	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIUM	30	1	--	-	--	-
....STAURASTRUM	--	-	--	-	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	840#	22	3500	10	21000#	76
....MELOSIRA	30	1	--	-	470	2
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	--	-
....COCCONEIS	--	-	--	-	--	-
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	--	-
...DIATOMACEAE						
....DIATOMA	--	-	--	-	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	--	-	--	-	--	-
....FRAGILARIA	--	-	--	-	--	-
....SYNEDRA	30	1	--	-	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	--	-	--	-	--	-
...NITZSCHIACEAE						
....NITZSCHIA	120	3	370	1	470	2
...SURIRELLACEAE						
....SURIRELLA	--	-	--	-	--	-

CONTINUED ...

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	JUL 16,80 1145		AUG 12,80 1230		SEP 23,80 1400	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	570	15	--	-	230	1
...CRYPTOMONADACEAE						
....CRYPTOMONAS	180	5	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCUCCACEAE						
....AGMENELLUM	--	-	21000#	58	--	-
....ANACYSTIS	390	10	1200	3	--	-
..HORMOGONALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	--	-	--	-
....SCHIZOTHRIX	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
      * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01619000 ANTIETAM CREEK NEAR WAYNESBORO, PA

LOCATION.--Lat 39°42'59", long 77°36'28", Washington County, Md., Hydrologic Unit 02070004, on right bank 100 ft (30 m) upstream from highway bridge at Rocky Forge, 0.4 mi (0.6 km) downstream from Pennsylvania-Maryland State line, 0.7 mi (1.1 km) downstream from confluence of west and east branches, 1.9 mi (3.1 km) northeast of Leitersburg, Md., 2.5 mi (4.0 km) southwest of Waynesboro, Pa., and 36.6 mi (58.9 km) upstream from mouth.

DRAINAGE AREA.--93.5 mi^2 (242.2 km^2).

PERIOD OF RECORD.--May 1948 to September 1951, October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 536.59 ft (163.553 m) National Geodetic Vertical Datum of 1929. May 1948 to September 1951, nonrecording gage and crest-stage gage 100 ft (30 m) downstream at present datum.

REMARKS.--Records good except those for period of no gage-height record, Feb. 10 to May 8, which are fair. Occasional regulation from mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years (water years 1949-51, 1966-80), 120 ft^3/s (3.398 m^3/s), 17.43 in/yr (443 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft^3/s (154 m^3/s) June 22, 1972, gage height, 12.33 ft (3.758 m), from rating curve extended above 2,700 ft^3/s (76.5 m^3/s); minimum daily, 11 ft^3/s (0.31 m^3/s) Jan. 30, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 870 ft^3/s (24.6 m^3/s) Oct. 3, gage height, 5.40 ft (1.646 m), no other peak above base of 850 ft^3/s (24 m^3/s); minimum, 34 ft^3/s (0.96 m^3/s) Sept. 28, 29, 30, gage height, 3.12 ft (0.951 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	229	112	128	127	92	67	320	281	115	70	49	41
2	154	165	124	123	102	67	290	231	115	68	48	48
3	515	217	117	120	103	68	270	221	115	67	47	51
4	312	152	117	119	88	69	260	201	110	66	47	42
5	363	142	115	116	85	74	240	187	105	64	46	52
6	378	141	114	111	85	77	230	172	100	62	45	46
7	318	137	111	110	82	72	210	166	105	62	45	43
8	268	133	107	107	78	73	200	161	105	64	45	40
9	277	130	104	103	76	78	371	153	100	68	45	40
10	332	141	103	99	74	76	320	147	99	72	52	41
11	293	141	101	103	72	78	280	143	98	64	78	39
12	275	140	100	119	72	76	246	143	94	60	89	38
13	260	131	116	102	70	78	249	164	90	59	54	38
14	224	127	112	130	68	82	289	140	89	56	50	38
15	203	119	100	150	68	86	302	127	87	55	55	38
16	192	118	98	125	68	100	255	119	85	54	52	38
17	173	113	97	121	69	140	227	114	86	54	51	45
18	163	112	92	129	70	200	216	161	84	54	55	41
19	155	111	92	147	70	180	202	142	82	52	51	38
20	151	109	89	127	71	160	191	143	80	50	50	37
21	145	106	87	124	75	350	182	335	78	52	48	39
22	140	106	87	123	91	500	172	237	76	66	47	37
23	167	104	87	123	87	380	165	194	75	70	45	37
24	183	105	88	117	84	250	159	208	74	57	45	35
25	144	105	336	116	81	240	153	209	72	54	43	38
26	134	202	208	113	78	210	149	169	71	52	42	37
27	125	205	170	107	74	190	196	152	70	50	42	35
28	130	156	154	106	73	180	217	140	69	50	42	35
29	125	141	145	104	71	260	255	130	68	53	41	35
30	118	133	140	99	---	250	225	120	74	52	40	35
31	115	---	133	100	---	240	---	115	---	50	45	---
TOTAL	6761	4054	3772	3620	2277	4951	7041	5325	2671	1827	1534	1197
MEAN	218	135	122	117	78.5	160	235	172	89.0	58.9	49.5	39.9
MAX	515	217	336	150	103	500	371	335	115	72	89	52
MIN	115	104	87	99	68	67	149	114	68	50	40	35
CFSM	2.33	1.44	1.31	1.25	.84	1.71	2.51	1.84	.95	.63	.53	.43
IN.	2.69	1.61	1.50	1.44	.91	1.97	2.80	2.12	1.06	.73	.61	.48

CAL YR 1979 TOTAL 58722 MEAN 161 MAX 1550 MIN 47 CFSM 1.72 IN 23.36
WTR YR 1980 TOTAL 45030 MEAN 123 MAX 515 MIN 35 CFSM 1.32 IN 17.92

01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD

LOCATION.--Lat 39°27'01", long 77°43'52", Washington County, Hydrologic Unit 02070004, on left bank 400 ft (120 m) downstream from Burnside Bridge, 1.0 mi (1.6 km) southeast of Sharpsburg, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--281 mi^2 (728 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1897 to September 1905, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 192: 1897-1905. WSP 726: Drainage area. WSP 1432: 1929-31(M), 1933, 1935(M), 1937(M), 1949(M), 1952(M).

GAGE.--Water-stage recorder. Concrete control since Mar. 29, 1934. Datum of gage is 311.05 ft (94.793 m) National Geodetic Vertical Datum of 1929. June 24, 1897, to Aug. 25, 1905, nonrecording gage a few hundred feet downstream from Middle Bridge, 1.2 mi (1.9 km) upstream at datum 12 ft (3.7 m) higher. Aug. 21, 1928, to July 13, 1933, nonrecording gage at Burnside Bridge, 0.1 mi (0.2 km) upstream at present datum.

REMARKS.--Water-discharge records good. Some diurnal fluctuation caused by powerplant above station. Since 1928 records include pumpage from the Potomac River for municipal supply of Hagerstown. This water later enters Antietam Creek above station as sewage.

AVERAGE DISCHARGE.--57 years (water years 1898-1903, 1905, 1931-80), 277 ft^3/s (7.845 m^3/s), 13.39 in/yr (340 mm/yr), adjusted for inflow since January 1930.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft^3/s (357 m^3/s) July 20, 1956, gage height, 16.73 ft (5.099 m); minimum, 9.4 ft^3/s (0.266 m^3/s) Nov. 22, 1957, result of regulation caused by construction work above station; minimum daily, 37 ft^3/s (1.05 m^3/s) Jan. 30, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,410 ft^3/s (39.9 m^3/s) Oct. 3, gage height, 5.27 ft (1.606 m), no peak above base of 1,500 ft^3/s (42 m^3/s); minimum, 112 ft^3/s (3.17 m^3/s) Sept. 28, 29, 30, gage height, 2.37 ft (0.722 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	541	379	391	374	280	220	925	648	358	241	174	132
2	549	424	381	362	275	190	814	615	357	215	163	139
3	993	614	366	351	270	200	762	568	391	215	160	171
4	897	527	358	347	260	205	743	540	355	216	155	147
5	869	473	351	349	260	220	702	512	322	205	158	150
6	1040	460	346	331	260	233	634	489	312	202	155	155
7	797	453	339	323	250	221	604	476	369	196	152	152
8	718	439	325	320	250	218	578	454	373	211	150	137
9	752	430	314	312	240	217	771	435	334	234	147	129
10	1210	432	310	302	240	217	757	419	340	252	147	139
11	1050	443	307	301	240	219	657	405	326	205	180	132
12	892	441	302	345	230	212	625	402	299	199	237	127
13	826	421	329	320	230	215	643	466	286	194	188	124
14	727	403	345	326	220	232	643	413	281	188	163	122
15	669	389	306	443	220	233	720	379	272	185	163	122
16	633	381	295	401	220	269	646	358	368	182	177	124
17	594	376	289	380	220	342	594	344	307	180	155	124
18	556	374	279	397	215	573	572	422	273	180	160	142
19	524	367	277	474	215	509	550	412	264	177	163	129
20	503	361	275	431	210	439	525	408	258	171	158	122
21	487	351	268	407	220	697	507	703	250	174	152	119
22	469	339	265	400	250	1140	489	710	241	238	150	127
23	484	332	265	397	267	785	477	552	235	257	147	127
24	612	332	266	383	255	684	465	534	232	202	144	119
25	496	336	570	375	242	666	449	548	229	185	139	122
26	460	416	665	365	236	588	438	487	224	180	139	124
27	436	593	487	350	227	533	508	440	223	171	137	119
28	430	467	443	341	225	504	553	414	212	168	137	114
29	430	429	420	335	221	752	663	392	218	174	134	112
30	404	406	401	310	---	720	574	373	279	182	132	114
31	389	---	389	300	---	706	---	363	---	174	127	---
TOTAL	20437	12588	10924	11152	6948	13159	18588	14681	8788	6153	4843	3916
MEAN	659	420	352	360	240	424	620	474	293	198	156	131
MAX	1210	614	665	474	280	1140	925	710	391	257	237	171
MIN	389	332	265	300	210	190	438	344	212	168	127	112
(≠)	-6.2	-6.2	-6.6	-7.3	-7.6	-9.2	-6.5	-6.0	-7.3	-12.9	-13.0	-13.0
MEAN♦	653	414	345	353	232	415	614	468	286	185	143	117
CFSM♦	2.32	1.47	1.23	1.26	0.83	1.48	2.18	1.67	1.02	0.66	0.51	0.42
IN♦	2.68	1.64	1.42	1.45	0.90	1.71	2.43	1.92	1.14	0.76	0.59	0.47

CAL YR 1979 TOTAL 168185 MEAN 461 MAX 4090 MIN 135 MEAN♦ 453 CFSM♦ 1.61 IN♦ 21.85
WTR YR 1980 TOTAL 132177 MEAN 361 MAX 1210 MIN 112 MEAN♦ 352 CFSM♦ 1.25 IN♦ 17.08

≠ Pumpage in cubic feet per second, from Potomac River for municipal supply of Hagerstown.
♦ Adjusted for pumpage.

01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
JUN 13...	1330	290	442	7.8	26.0	16.4	0	10.5	200	33	60	13

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
JUN 13...	9.3	9	.3	3.1	170	24	14	.2	6.4	260	232

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUN 13...	.35	204	4.3	.130	.40	420	410	10	40	30	10

01636500 SHENANDOAH RIVER AT MILLVILLE, WV

LOCATION.--Lat 39°16'55", long 77°47'22", Jefferson County, Hydrologic Unit 02070007, on left bank 0.4 mi (0.6 km) downstream from Cattail Run, 1.0 mi (1.6 km) upstream from Millville, 5.0 mi (8.0 km) upstream from Harpers Ferry, and at mile 5.0 (8.0 km).

DRAINAGE AREA.--3,040 mi² (7,874 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1895 to March 1909, August 1928 to current year.

REVISED RECORDS.--WSP 951: 1936(M). WSP 1432: Drainage area at former site, 1895-99, 1901-02, 1905, 1907-08, 1932(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 293.00 ft (89.306 m) National Geodetic Vertical Datum of 1929. Apr. 15, 1895, to Mar. 31, 1909, nonrecording gage at site 0.8 mi (1.3 km) downstream at datum 0.32 ft (0.098 m) higher.

REMARKS.--Water-discharge records good except those for February, which are poor. Regulation by hydroelectric plants, particularly that of Potomac Light and Power Co., 0.5 mi (0.8 km) upstream from station. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--65 years (water years 1896-1908, 1929-80), 2,705 ft³/s (76.61 m³/s), 12.08 in/yr (307 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 230,000 ft³/s (6,510 m³/s) Oct. 16, 1942, gage height, 32.4 ft (9.88 m), from floodmarks; minimum, about 59 ft³/s (1.67 m³/s) Oct. 4, 1930, gage height, 0.39 ft (0.119 m); minimum daily, 194 ft³/s (5.49 m³/s) July 24, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1870 reached practically same stage as flood of Mar. 18, 1936, 26.36 ft (8.035 m), discharge, 151,000 ft³/s (4,280 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s (420 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 4	1100	24800	702	10.85	3.307	Apr. 10	2330	18800	532	9.44	2.877
Oct. 6	2045	*27400	776	11.38	3.469	Apr. 16	1100	20000	566	9.76	2.975
Oct. 12	0515	20600	583	9.91	3.020	May 2	0015	18100	513	9.25	2.819
Jan. 20	0545	18700	530	9.41	2.868						

Minimum discharge, 454 ft³/s (12.9 m³/s) Sept. 13, gage height, 1.38 ft (0.421 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4090	2640	5840	2710	3290	2000	6190	12800	2840	996	944	628
2	8370	2640	5060	2560	3030	1900	6460	15500	3200	996	969	648
3	16400	6040	4430	2440	3000	1900	6550	10600	3030	1030	880	656
4	22000	10800	4020	2280	2900	1800	6120	8160	2730	1020	864	604
5	15200	8950	3620	2300	2800	1900	5680	6720	2420	978	824	616
6	23300	7110	3350	2200	2700	2300	5920	5760	2170	969	824	628
7	20400	5920	3200	2200	2600	3600	5360	5080	2060	944	864	628
8	12600	5170	2990	2100	2450	5100	4850	4620	2010	1080	824	628
9	9700	4620	2780	2100	2370	4660	4790	4130	1870	1250	816	604
10	12500	4210	2600	2000	2280	4510	11200	3750	1820	1230	776	592
11	18400	4000	2450	2000	2220	4300	15600	3450	1750	1020	744	586
12	20100	4030	2310	2280	2300	3840	10300	3220	1620	1310	848	610
13	19400	4390	2350	3080	2200	3580	7840	3070	1540	1210	952	532
14	15200	5020	2470	5190	2100	3450	6720	2840	1530	1100	1080	544
15	11700	4950	2440	6900	2000	3350	8110	2640	1430	1060	978	556
16	9270	4740	2340	11700	1960	4070	18300	2440	1570	996	928	550
17	7650	4450	2230	9620	2000	5760	13300	2250	1580	912	808	568
18	6620	4190	2120	7720	1900	9910	9450	2340	1530	824	808	580
19	5790	3880	2020	11400	1900	12600	7550	2420	1370	840	856	568
20	5210	3580	2010	17000	1800	10400	6440	2910	1370	784	1030	616
21	4750	3330	1950	12100	1900	8420	5740	9000	1270	800	987	616
22	4380	3120	1920	9170	1840	9340	5120	10000	1250	856	1110	672
23	4100	2930	1880	7530	1970	11000	4620	9060	1220	960	1000	712
24	4000	2780	1840	6530	2040	8500	4210	6830	1150	1050	872	680
25	3860	2620	2230	5860	2050	7150	3980	5700	1140	1040	808	610
26	3770	3120	3750	5250	2020	6310	3860	6380	1110	1060	760	720
27	3450	6570	4070	4850	1960	5700	4150	5170	1090	1210	752	760
28	3220	12800	3920	4470	2050	5060	5420	4320	1080	978	736	680
29	3010	9200	3450	4090	2000	5080	6420	3620	1060	864	712	604
30	2930	7060	3140	3790	---	5920	6420	3160	1090	864	610	634
31	2820	---	2910	3560	---	6210	---	2880	---	904	648	---
TOTAL	304190	154860	91690	166980	65630	169620	216670	170820	50900	31135	26612	18630
MEAN	9813	5162	2958	5386	2263	5472	7222	5510	1697	1004	858	621
MAX	23300	12800	5840	17000	3290	12600	18300	15500	3200	1310	1110	760
MIN	2820	2620	1840	2000	1800	1800	3860	2250	1060	784	610	532
CFSM	3.23	1.70	.97	1.77	.74	1.80	2.38	1.81	.56	.33	.28	.20
IN.	3.72	1.89	1.12	2.04	.80	2.08	2.65	2.09	.62	.38	.33	.23

CAL YR 1979 TOTAL 1841962 MEAN 5046 MAX 50600 MIN 771 CFSM 1.66 IN 22.54
WTR YR 1980 TOTAL 1467737 MEAN 4010 MAX 23300 MIN 532 CFSM 1.32 IN 17.96

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-63, 1965, 1969-71, 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT 24...	1100	4110	340	8.4	9.0	16.0	1.0	8.6	K180	600	120
NOV 28...	1100	14000	290	7.9	13.5	11.0	30	--	2900	3300	130
DEC 10...	1145	2600	325	8.7	12.0	5.0	1.0	14.4	K5	K4	130
JAN 21...	1200	12200	206	7.4	4.0	5.0	18	11.8	1900	K17000	83
FEB 20...	1030	1810	450	8.5	7.0	3.0	.60	14.4	K1	<1	170
MAR 20...	1030	10600	195	8.0	16.0	8.5	10	11.0	240	70	84
APR 17...	1030	13600	151	7.4	12.0	10.0	8.0	10.2	K4700	4400	68
MAY 14...	1045	2840	310	7.8	20.5	19.6	1.9	9.0	77	56	130
JUN 17...	1030	1580	374	8.2	17.5	20.5	.30	9.5	52	45	140
JUL 16...	1000	996	370	8.6	30.0	28.5	5.5	9.6	41	3300	120
AUG 12...	1015	768	458	8.5	26.0	28.0	4.0	8.1	K110	66	170
SEP 24...	1200	7.4	578	8.5	21.5	23.5	.40	8.8	32	100	200

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 24...	38	36	6.6	5.6	12	.2	1.7	79	35	7.9	.1
NOV 28...	6	35	9.4	7.1	15	.3	1.9	120	20	6.8	.1
DEC 10...	24	39	8.9	11	19	.4	1.5	110	31	7.8	.0
JAN 21...	17	25	5.0	5.3	12	.3	1.8	66	19	5.9	.1
FEB 20...	27	47	12	22	22	.7	1.5	140	53	12	.1
MAR 20...	23	25	5.3	6.7	14	.3	1.7	61	19	6.5	.1
APR 17...	11	20	4.3	4.3	12	.2	1.7	57	13	4.2	.1
MAY 14...	23	37	9.8	16	21	.6	1.5	110	38	8.5	.1
JUN 17...	29	36	12	26	28	1.0	2.2	110	60	11	.1
JUL 16...	8	26	13	22	28	.9	2.6	110	51	16	.1
AUG 12...	35	43	14	27	26	.9	5.3	130	67	16	.2
SEP 24...	41	54	16	43	31	1.3	3.3	160	100	22	.2

K Results based on colony count outside the acceptable range (non-ideal colony count).

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)
OCT 24...	5.9	172	152	.23	1910	1.2	1.2	.11	.00	.13	.00
NOV 28...	3.6	154	162	.21	5820	1.3	1.3	.08	.00	.10	.00
DEC 10...	2.2	194	173	.26	1360	1.3	1.2	.02	.00	.02	.00
JAN 21...	6.1	131	113	.18	4320	--	1.1	--	.07	--	.09
FEB 20...	2.9	254	243	.35	1240	1.8	1.8	.02	.02	.02	.03
MAR 20...	6.1	121	113	.16	3460	1.2	1.2	.13	.15	.16	.19
APR 17...	6.0	99	91	.13	3640	.88	.81	.04	.05	.05	.06
MAY 14...	2.7	185	184	.25	1420	1.0	1.0	.04	.00	.05	.00
JUN 17...	.7	224	217	.30	956	.64	.67	.10	.03	.12	.04
JUL 16...	5.2	221	202	.30	594	.02	.02	.10	.03	.12	.04
AUG 12...	4.3	275	256	.37	570	.24	.25	.06	.05	.07	.06
SEP 24...	4.8	370	344	.50	7.43	1.0	1.1	.03	.03	.04	.04

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)
OCT 24...	.15	--	.26	--	--	1.5	--	6.5	.040	.12	.020
NOV 28...	1.1	.83	1.2	.37	.83	2.5	2.1	11	.120	.37	.040
DEC 10...	.20	--	.22	.00	--	1.5	--	6.7	.040	.12	.030
JAN 21...	--	.50	--	--	.57	--	1.7	--	.150	.46	.120
FEB 20...	.98	1.3	1.0	.00	1.3	2.8	3.1	12	.110	.34	.110
MAR 20...	.72	.44	.85	.26	.59	2.1	1.8	9.1	.180	.55	.090
APR 17...	.67	.19	.71	.47	.24	1.6	1.1	7.0	.240	.74	.070
MAY 14...	.19	.15	.23	.08	.15	1.2	1.2	5.4	.000	.00	.020
JUN 17...	.60	.39	.70	.28	.42	1.3	1.1	5.9	.060	.18	.010
JUL 16...	1.3	.35	1.4	1.0	.38	1.4	.40	6.3	.140	.43	.010
AUG 12...	.67	.44	.73	.24	.49	.97	.74	4.3	.120	.37	.040
SEP 24...	.23	.12	.26	.11	.15	1.3	1.3	5.6	.160	.49	.110

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	--	--	--	--	--	--	--
DEC 10...	0	0	0	0	0	30	0	0	0	10	0
FEB 20...	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	1	0	1	50	20	30	0	0	0	10	0
MAY 14...	--	--	--	--	--	--	--	--	--	--	--
JUN 17...	1	0	1	50	--	50	0	0	4	10	0
AUG 12...	--	--	--	--	--	--	--	--	--	--	--
SEP 24...	1	0	1	100	100	0	0	0	0	10	0

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)
OCT 24...	--	--	--	--	--	--	--	--	--	20
NOV 28...	--	--	--	--	--	--	--	--	--	--
DEC 10...	10	0	0	3	2	0	2	100	80	20
FEB 20...	--	--	--	--	--	--	--	--	--	--
MAR 20...	10	1	0	1	5	3	2	1400	1400	20
MAY 14...	--	--	--	--	--	--	--	--	--	--
JUN 17...	10	0	0	0	2	0	2	210	200	10
AUG 12...	--	--	--	--	--	--	--	--	--	--
SEP 24...	10	0	0	0	4	1	3	320	320	0

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
OCT 24...	--	--	--	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	--	--	--	--	--	--
DEC 10...	70	70	0	10	5	5	.1	.0	.1	2
FEB 20...	--	--	--	--	--	--	--	--	--	--
MAR 20...	8	8	0	90	90	3	.1	.0	.1	4
MAY 14...	--	--	--	--	--	--	--	--	--	--
JUN 17...	3	3	0	40	30	8	.1	--	.1	0
AUG 12...	--	--	--	--	--	--	--	--	--	--
SEP 24...	3	3	0	40	30	10	.1	--	.1	4

DATE	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 24...	--	--	--	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	0	--	--	--	--	--
DEC 10...	2	0	0	0	0	0	0	10	0	20
FEB 20...	--	--	--	--	0	--	--	--	--	--
MAR 20...	4	0	0	0	0	0	0	270	120	150
MAY 14...	--	--	--	--	0	--	--	--	--	--
JUN 17...	0	0	0	0	0	0	0	10	8	2
AUG 12...	--	--	--	--	0	--	--	--	--	--
SEP 24...	2	2	0	0	0	0	0	60	60	0

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	PHYTO-PLANK-TON, TOTAL (CELLS PER ML)
NOV				
28...	4.9	--	--	11000
DEC				
10...	--	2.2	.5	--
JAN				
21...	7.0	--	--	--
FEB				
20...	.5	--	--	--
MAR				
20...	--	2.9	2.5	1600
APR				
17...	5.2	--	--	--
MAY				
14...	1.5	--	--	23000
JUN				
17...	--	4.6	1.2	57000
JUL				
16...	6.5	--	--	--
AUG				
12...	5.8	--	--	91000
SEP				
24...	--	3.5	1.3	34000

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT			
24...	18	111	88
NOV			
28...	187	4050	83
DEC			
10...	4	28	55
JAN			
21...	138	4550	96
FEB			
20...	2	9.8	64
MAR			
20...	74	2120	93
APR			
17...	164	6020	94
JUN			
17...	13	55	93
AUG			
12...	62	129	72
SEP			
24...	21	.42	97

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

PHYTOPLANKTON ANALYSES, AUGUST 1979 TO SEPTEMBER 1979

DATE		SEP 5,79
TIME		1130
TOTAL CELLS/ML		360000
DIVERSITY:	DIVISION	1.3
	.CLASS	1.3
	..ORDER	1.4
	...FAMILY	1.7
	....GENUS	2.7

ORGANISM	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)		
.CHLOROPHYCEAE		
..CHLOROCOCCALES		
...CHLOROCOCCACEAE		
....CHLOROCOCCUM	*	0
...COELASTRACEAE		
....COELASTRUM	3900	1
...OOCYSTACEAE		
....ANKISTRODESMUS	13000	4
....CHLORELLA	34000	9
....CHODATELLA	13000	4
....KIRCHNERIELLA	12000	3
....TETRAEDRON	*	0
....TREUBARIA	*	0
...SCENEDESMACEAE		
....SCENEDESMUS	25000	7
....TETRASTRUM	2000	1
..VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	*	0
CHRYSOPHYTA		
.BACILLARIOPHYCEAE		
..CENTRALES		
...COSCINODISCACEAE		
....CYCLOTELLA	28000	8
....MELOSIRA	*	0
..PENNALES		
...NAVICULACEAE		
....NAVICULA	*	0
...NITZSCHIACEAE		
....NITZSCHIA	3900	1
CRYPTOPHYTA (CRYPTOMONADS)		
.CRYPTOPHYCEAE		
..CRYPTOMONADALES		
...CRYPTOMONADACEAE		
....CRYPTOMONAS	2000	1
CYANOPHYTA (BLUE-GREEN ALGAE)		
.CYANOPHYCEAE		
..CHROOCOCCALES		
...CHROOCOCCACEAE		
....AGMENELLUM	70000#	20
....ANACYSTIS	150000#	41

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	NOV 20,79	MAR 20,80	MAY 14,80	JUN 17,80
TIME	1100	1030	1045	1030
TOTAL CELLS/ML	11000	1600	23000	57000
DIVERSITY: DIVISION	0.2	1.0	1.1	1.3
.CLASS	0.2	1.0	1.1	1.3
..ORDER	0.7	1.1	1.4	1.4
...FAMILY	2.3	1.6	1.5	1.7
....GENUS	2.4	1.6	1.5	2.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....MICRACTINIUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	90	1	--	-	--	-	3000	5
....CHODATELLA	--	-	--	-	160	1	740	1
....KIRCHNERIELLA	90	1	--	-	--	-	370	1
....OOCYSTIS	--	-	--	-	--	-	370	1
....SELENASTRUM	--	-	--	-	490	2	*	0
....TETRAEDRON	--	-	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	7400	13
....SCENEDESMUS	--	-	--	-	1300	6	24000#	42
....TETRASTRUM	--	-	--	-	--	-	740	1
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	39	2	490	2	740	1
..ZYGNEMATALES								
...DESMIDIACEAE								
....STAURASTRUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	810	8	26	2	16000#	69	8100	14
....MELOSIRA	270	3	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	13	1	--	-	--	-
....COCCONEIS	180	2	--	-	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	180	2	13	1	--	-	--	-
...DIATOMACEAE								
....DIATOMA	4700#	44	--	-	--	-	--	-
...FRAGILARIACEAE								
....SYNEDRA	90	1	39	2	--	-	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	450	4	26	2	--	-	--	-
...NAVICULACEAE								
....NAVICULA	2200#	20	170	11	160	1	--	-
...NITZSCHIACEAE								
....NITZSCHIA	1600#	15	64	4	330	1	--	-
...SURIRELLACEAE								
....SURIRELLA	--	-	26	2	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	4400#	19	11000#	20
....COCCOCHLORIS	--	-	--	-	--	-	--	-
....GOMPHOSPHAERIA	--	-	--	-	--	-	--	-
..HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	1200#	73	--	-	--	-

CONTINUED ...

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	NOV 28,79		MAR 20,80		MAY 14,80		JUN 17,80	
TIME	1100		1030		1045		1030	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	13	1	--	-	--	-
....EUTREPTIA	90	1	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..GYMNODINIALES								
...GYMNODINIACEAE								
....GYMNODINIUM	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	JUL 16,80	AUG 12,80	SEP 24,80
TIME	1000	1015	1200
TOTAL CELLS/ML	330000	91000	34000
DIVERSITY: DIVISION	1.5	1.3	1.1
.CLASS	1.5	1.3	1.1
..ORDER	1.8	1.3	1.2
...FAMILY	2.4	2.0	1.6
....GENUS	3.4	3.0	2.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	*	0	--	-	--	-
...HYDRODICTYACEAE						
....PEDIASTRUM	10000	3	4300	5	--	-
...MICRACTINIACEAE						
....MICRACTINIUM	*	0	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	20000	6	7500	8	2200	7
....CHODATELLA	*	0	*	0	2400	7
....KIRCHNERIELLA	30000	9	2700	3	280	1
....OOCYSTIS	--	-	--	-	--	-
....SELENASTRUM	--	-	5900	6	2700	8
....TETRAEDRON	*	0	800	1	--	-
....TREUBARIA	7800	2	*	0	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	9100	3	--	-	--	-
....SCENEDESMUS	63000#	19	19000#	21	8900#	26
....TETRASTRUM	--	-	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	3900	1	*	0	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....STAURASTRUM	5200	2	--	-	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	42000	13	4300	5	560	2
....MELOSIRA	--	-	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	--	-
....COCCONEIS	--	-	--	-	--	-
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	--	-
...DIATOMACEAE						
....DIATOMA	--	-	--	-	--	-
...FRAGILARIACEAE						
....SYNEDRA	--	-	--	-	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	--	-	*	0	--	-
...NITZSCHIACEAE						
....NITZSCHIA	5200	2	*	0	280	1
...SURIRELLACEAE						
....SURIRELLA	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	-	540	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	18000	6	17000#	19	--	-
....ANACYSTIS	39000	12	24000#	26	17000#	49
....COCCOCHLORIS	--	-	4000	4	--	-
....GOMPHOSPHAERIA	65000#	20	--	-	--	-
..HORMOGONALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	--	-	--	-

CONTINUED ...

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	JUL 16,80		AUG 12,80		SEP 24,80	
TIME	1000		1015		1200	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
....EUTREPTIA	--	-	--	-	--	-
....TRACHELOMONAS	*	0	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..GYMNODINIALES						
...GYMNODINIACEAE						
....GYMNODINIUM	*	0	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01637500 CATOCTIN CREEK NEAR MIDDLETOWN, MD

LOCATION.--Lat 39°25'35", long 77°33'25", Frederick County, Hydrologic Unit 02070008, on right bank 300 ft (91 m) downstream from bridge on State Highway 17, 1.3 mi (2.1 km) south of Middletown, 2.2 mi (3.5 km) downstream from Little Catoctin Creek, and 14.8 mi (23.8 km) upstream from mouth.

DRAINAGE AREA.--66.9 mi^2 (173.3 km^2).

PERIOD OF RECORD.--August 1947 to current year.

REVISED RECORDS.--WSP 1432: 1947-48. WDR MD-DE-77-1: 1960(M), 1965(M), 1970(M), 1972(P), 1975(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 385 ft (117.3 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 77.2 ft^3/s (2.186 m^3/s), 15.67 in/yr (398 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft^3/s (340 m^3/s) Oct. 9, 1976, gage height, 14.13 ft (4.307 m), from rating curve extended above 2,600 ft^3/s (73.6 m^3/s) on basis of slope-area measurement of peak flow; no flow Aug. 27 to Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft^3/s (34 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 1	0830	1290	36.5	4.65	1.417	Mar. 21	1330	*2250	63.7	5.97	1.820
Oct. 3	0700	1650	46.7	5.18	1.579						

Minimum discharge, 1.9 ft^3/s (0.054 m^3/s) Mar. 1, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	452	64	79	82	47	23	363	229	68	26	12	3.8
2	218	83	75	77	50	33	289	181	64	22	11	4.2
3	735	156	69	72	48	32	248	164	89	22	10	21
4	318	111	67	68	48	33	272	145	68	22	8.7	11
5	421	97	67	69	48	54	206	129	52	21	12	7.0
6	367	92	66	55	46	61	174	115	50	20	8.6	5.5
7	266	88	64	50	46	48	156	109	96	16	7.6	4.9
8	211	83	58	50	44	50	143	96	103	26	7.1	7.4
9	343	79	53	48	42	54	361	87	66	31	6.3	5.0
10	1020	82	52	46	40	47	242	79	82	46	6.8	4.9
11	597	88	50	59	38	50	208	75	63	24	15	4.6
12	470	94	48	81	38	41	191	74	50	19	15	4.5
13	372	82	64	58	37	42	195	101	43	17	11	3.8
14	283	82	67	93	38	40	195	71	38	14	8.0	3.4
15	230	74	52	166	39	70	195	61	37	13	8.3	3.4
16	196	73	50	127	42	99	159	55	114	13	10	3.1
17	170	70	45	119	33	215	140	51	58	12	8.9	3.1
18	151	68	36	160	33	339	130	121	45	12	8.8	4.6
19	131	64	45	210	32	228	120	88	41	11	9.2	3.7
20	121	62	41	160	32	192	110	85	42	10	9.8	3.8
21	109	59	40	140	39	882	103	327	34	9.5	8.9	3.7
22	99	58	40	120	62	529	94	180	31	40	8.0	4.0
23	115	56	41	100	55	377	88	139	28	58	7.8	4.2
24	167	55	44	95	50	303	83	186	26	29	7.5	3.7
25	103	55	291	90	42	272	79	166	26	17	6.2	4.6
26	89	137	177	80	36	209	76	125	24	14	5.4	4.4
27	81	142	139	75	32	176	136	105	22	13	4.8	3.9
28	86	103	121	65	28	159	156	92	21	12	4.4	4.1
29	82	95	109	60	26	368	208	81	45	13	4.1	3.5
30	71	83	99	55	---	268	165	70	46	12	4.0	2.9
31	67	---	90	55	---	311	---	67	---	12	4.0	---
TOTAL	8141	2535	2339	2785	1191	5625	5285	3654	1572	626.5	259.2	151.7
MEAN	263	84.5	75.5	89.8	41.1	181	176	118	52.4	20.2	8.36	5.06
MAX	1020	156	291	210	62	882	363	327	114	58	15	21
MIN	67	55	36	46	26	23	76	51	21	9.5	4.0	2.9
CFSM	3.93	1.26	1.13	1.34	.61	2.71	2.63	1.76	.78	.30	.13	.08
IN.	4.53	1.41	1.30	1.55	.66	3.13	2.94	2.03	.87	.35	.14	.08

CAL YR 1979 TOTAL 48454.8 MEAN 133 MAX 2220 MIN 9.3 CFSM 1.99 IN 26.94
WTR YR 1980 TOTAL 34164.4 MEAN 93.3 MAX 1020 MIN 2.9 CFSM 1.40 IN 19.00

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD

LOCATION.--Lat 39°16'25", long 77°32'35", Frederick County, Hydrologic Unit 02070008, on left bank at downstream side of bridge on U.S. Highway 15 at Point of Rocks, 0.3 mi (0.5 km) downstream from Catoctin Creek (Virginia), 6 mi (9.7 km) upstream from Monocacy River, and at mile 139.5 (256.6 km).
DRAINAGE AREA.--9,651 mi² (24,996 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1895 to current year.
REVISED RECORDS.--WSP 192: 1895-1905. WSP 1432: 1899, 1901-2, 1904-5, 1912, 1914(M), 1915, 1917(M), 1918, 1919(M), 1920, 1921-23(M), 1924, 1925-28(M), 1930(M).
GAGE.--Water-stage recorder. Datum of gage is 200.63 ft (61.152 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1929, nonrecording gage at same site. Prior to Sept. 2, 1902, at datum about 0.45 ft (0.317 m) higher.
REMARKS.--Water-discharge records good. Low flow affected slightly since 1913 by Stony River Reservoir (see station 01595200) and since December 1950 by Savage River Reservoir (see station 01597500). Low flow affected extensively at times by run-of-the-river hydroelectric plants. Gage-height telemeter at station.
AVERAGE DISCHARGE.--85 years, 9,402 ft³/s (266.3 m³/s), 13.23 in/yr (336 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480,000 ft³/s (13,600 m³/s) Mar. 19, 1936, gage height, 41.03 ft (12.506 m) from rating curve extended above 300,000 ft³/s (8,500 m³/s) on the basis of adjustment of figure of peak flow at station near Washington for inflow and storage, and slope-area measurement of peak flow; minimum, 530 ft³/s (15.0 m³/s) Sept. 11, 12, 1966, gage height, 0.27 ft (0.082 m).
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1889, reached a stage of 40.2 ft (12.25 m), from floodmarks, discharge, about 460,000 ft³/s (13,000 m³/s) from rating curve extended as explained above.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 35,000 ft³/s (990 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 4	1700	53700	1520	11.67	3.557	Mar. 22	2200	45000	1270	10.32	3.146
Oct. 7	0330	62900	1780	12.98	3.956	Apr. 2	0500	50800	1440	11.21	3.417
Oct. 11	2300	*69500	1970	13.87	4.228	Apr. 11	0600	50400	1430	11.14	3.395
Nov. 4	1030	44500	1260	10.27	3.130	Apr. 16	2000	48000	1360	10.78	3.286
Nov. 28	0930	36600	1040	8.94	2.725	May 2	0730	68600	1940	13.72	4.182
Jan. 16	1600	39600	1120	9.44	2.877	May 22	2100	56400	1600	12.02	3.664
Mar. 19	2130	42000	1190	9.83	2.996						

Minimum discharge, 1,310 ft³/s (37.1 m³/s) Sept. 18, gage height, 0.78 ft (0.238 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13300	7720	16700	11500	8440	7910	37800	36100	9420	3410	4350	2130
2	14500	7440	14200	10500	7470	7240	48800	63100	10500	3230	3820	2070
3	25900	12900	12300	9700	7130	6570	38500	42400	10100	3140	3250	2100
4	46900	41100	11000	9030	7020	5890	30100	30600	9510	3110	2910	2150
5	40000	34700	10000	8590	6880	6280	30700	23900	8540	3050	2740	2020
6	46700	25100	9440	8040	6660	7310	22900	19400	8310	2990	2850	1990
7	55700	19800	9070	7540	6600	8450	19600	16800	8090	3080	2660	2050
8	37300	16900	8580	7300	6590	13800	17100	14700	7390	3450	2540	2130
9	28000	14700	8050	7090	6510	13400	16700	13300	7180	3830	2370	2350
10	33100	13300	7590	6860	6370	12900	26800	12000	7170	8410	2390	2250
11	57600	12200	7190	6600	6250	13600	46800	11000	7170	9350	2310	2020
12	61800	11800	6800	6830	5960	12300	34600	10200	6890	6740	2430	1920
13	48400	11500	6770	7530	5740	11600	26600	9830	7370	5670	2700	1700
14	39200	11900	7130	10100	5510	11000	22100	10500	6790	4930	2860	1500
15	31900	11800	8400	13900	5360	10400	25300	10100	6010	4390	2950	1530
16	25800	11200	9170	34600	5440	10900	42800	9090	6020	4410	2950	1500
17	21300	10600	8850	32600	5300	13500	40200	8140	5780	3870	2620	1420
18	18300	10000	8130	25300	5200	24300	30000	8110	7810	3390	2510	1420
19	15900	9600	7600	25400	5070	39200	24200	8200	8890	3100	2700	1570
20	13800	9100	7400	32400	5040	37800	20300	8920	6940	2840	3880	1570
21	12400	8700	7210	30200	5160	33200	17500	16100	5890	2660	8290	1580
22	11300	8330	6830	24400	5300	39100	15400	44300	5310	3300	6810	1610
23	10600	7920	6450	20000	5720	41900	13900	47600	4930	3790	5410	1710
24	10800	7640	6320	17000	7380	32100	12600	31600	4520	4020	4490	1630
25	11200	7340	7450	15100	12200	26000	11700	24400	4210	4050	3910	1630
26	10600	7650	16700	13600	11900	22700	11100	26500	3950	3810	3490	1650
27	9600	16700	27600	12400	10600	19700	11500	21100	3730	4150	3150	1810
28	8890	33500	21600	11700	9520	17200	13900	16400	3490	3540	2870	1660
29	8550	27200	17100	10800	8880	17400	25400	13200	3380	3060	2650	1570
30	8390	20600	14500	10400	---	26700	25000	11300	3530	2940	2390	1520
31	8090	---	12700	9420	---	31300	---	10100	---	3560	2230	---
TOTAL	785820	448940	328830	456430	201200	581650	759900	628990	198820	125270	103480	53760
MEAN	25350	14960	10610	14720	6938	18760	25330	20290	6627	4041	3338	1792
MAX	61800	41100	27600	34600	12200	41900	48800	63100	10500	9350	8290	2350
MIN	8090	7340	6320	6600	5040	5890	11100	8110	3380	2660	2230	1420
CFSM	2.63	1.55	1.10	1.53	.72	1.94	2.63	2.10	.69	.42	.35	.19
IN.	3.03	1.73	1.27	1.76	.78	2.24	2.93	2.42	.77	.48	.40	.21

CAL YR 1979 TOTAL 5853140 MEAN 16040 MAX 172000 MIN 2730 CFSM 1.66 IN 22.56
WTR YR 1980 TOTAL 4673090 MEAN 12770 MAX 63100 MIN 1420 CFSM 1.32 IN 18.01

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1960 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1960 to current year.

REMARKS.--Water temperatures are measured daily in field at time of sampling.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum daily, 33.5°C Aug. 24, 1964, July 19, 1977; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,350 mg/L Apr. 3, 1970; minimum daily mean, 1 mg/L on many days most years.
SEDIMENT LOADS: Maximum daily, 689,000 tons (625,000 tonnes) June 23, 1972; minimum daily, 2.0 tons (1.8 tonnes) on many days during 1964, 1966-69.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum daily, 32.0°C July 20; minimum daily, 1.0°C Jan. 31, Feb. 1.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 288 mg/L May 2; minimum daily mean, 3 mg/L on many days during winter.
SEDIMENT LOADS: Maximum daily, 50,000 tons (45,400 tonnes) May 2; minimum daily, 45 tons (41 tonnes) Sep. 14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV												
08...	1200	17060	166	8.2	11.0	9.0	10	11.4	90	27	26	6.0
DEC												
19...	1015	7620	320	8.4	1.0	2.0	2	13.0	130	40	38	7.8
MAR												
06...	1045	7270	295	8.6	7.5	3.0	5	--	120	30	34	7.6
MAY												
01...	1115	31000	220	7.7	19.5	12.0	5	--	84	25	25	5.3
JUN												
06...	1315	8270	260	8.4	21.0	19.0	5	--	120	36	35	7.1
JUL												
22...	1100	2690	345	8.2	32.0	28.0	11	--	130	39	35	10
AUG												
19...	1200	2610	420	8.2	--	23.0	5	--	170	--	48	12

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV											
08...	6.0	12	.3	2.0	63	27	5.4	.1	7.3	126	118
DEC											
19...	11	20	.4	1.9	87	39	11	.1	3.0	226	164
MAR											
06...	11	17	.4	1.5	86	40	12	.1	2.9	170	160
MAY											
01...	5.3	12	.3	2.0	59	31	6.0	.1	6.5	137	117
JUN											
06...	6.8	11	.3	1.6	81	33	7.7	.1	3.4	185	143
JUL											
22...	18	23	.7	2.5	90	54	14	.2	6.7	230	195
AUG											
19...	18	18	.6	3.0	--	60	17	.0	.0	--	21

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV											
08...	.17	5800	1.1	.030	.09	300	260	40	30	20	7
DEC											
19...	.31	4650	1.1	.030	.09	180	20	160	20	0	20
MAR											
06...	.23	3340	1.3	.070	.21	150	110	40	30	0	30
MAY											
01...	.19	11500	1.2	.120	.37	1900	1900	50	100	100	5
JUN											
06...	.25	4130	1.3	.050	.15	540	530	10	40	40	4
JUL											
22...	.31	1670	.56	.070	.21	570	560	10	60	60	5
AUG											
19...	.03	148	.01	.070	.21	340	330	10	60	60	0

DATE	TRITIUM IN WATER MOLE-CULES (TU)	TRITIUM WATER MOLE-CULES COUNT ERROR (TU)
OCT , 1978		
01-31	43.0	1.5
NOV		
01-30	39.7	1.4
DEC		
01-31	49.0	1.7
JAN , 1979		
01-31	87.8	2.8
FEB		
01-28	46.3	2.2
MAR		
01-31	42.4	3.8
APR		
01-30	47.4	4.3
MAY		
01-31	40.5	4.2
JUN		
01-30	34.8	4.2
JUL		
01-15	42.6	4.1
16-31	44.1	4.2
AUG		
01-18	37.8	4.1
19-31	42.3	4.1
SEP		
01-18	40.8	4.0
19-30	41.1	4.1
OCT		
01-07	36.5	2.6
NOV		
22-30	35.9	2.7
DEC		
01-31	41.8	3.4
JAN , 1980		
01-17	34.3	2.8
18-31	38.0	1.7

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	---	7.0	5.0	.0	1.0	10.0	12.0	24.0	23.0	27.0	26.0
2	20.0	---	6.0	3.0	1.0	1.0	10.0	13.0	22.0	25.0	26.0	27.0
3	20.0	---	6.0	2.0	1.0	2.0	10.0	13.0	22.0	27.0	27.0	27.0
4	19.0	---	6.0	4.0	1.0	2.0	10.0	16.0	21.0	25.0	27.0	25.0
5	17.0	---	5.0	4.0	1.0	3.0	10.0	15.0	21.0	26.0	28.0	26.0
6	16.0	---	4.0	4.0	1.0	5.0	12.0	16.0	20.0	27.0	27.0	27.0
7	15.0	---	---	2.0	2.0	6.0	12.0	19.0	21.0	24.0	30.0	26.0
8	---	---	---	4.0	3.0	7.0	13.0	17.0	24.0	23.0	30.0	24.0
9	---	---	---	4.0	2.0	7.0	13.0	17.0	20.0	23.0	30.0	26.0
10	---	---	---	3.0	2.0	7.0	13.0	18.0	19.0	24.0	30.0	24.0
11	---	---	---	2.0	2.0	7.0	13.0	16.0	19.0	25.0	28.0	21.0
12	---	---	---	2.0	1.0	7.0	12.0	16.0	19.0	24.0	26.0	22.0
13	---	---	---	1.0	2.0	5.0	13.0	17.0	19.0	25.0	25.0	22.0
14	---	---	---	2.0	2.0	5.0	11.0	18.0	20.0	24.0	26.0	25.0
15	---	---	---	3.0	2.0	7.0	12.0	16.0	20.0	25.0	27.0	23.0
16	---	---	---	3.0	3.0	7.0	10.0	17.0	20.0	27.0	24.0	21.0
17	---	---	---	3.0	2.0	6.0	9.0	17.0	20.0	27.0	25.0	21.0
18	---	---	---	4.0	1.0	7.0	11.0	18.0	20.0	27.0	22.0	23.0
19	---	---	---	5.0	2.0	7.0	13.0	19.0	20.0	27.0	23.0	24.0
20	---	---	---	5.0	3.0	8.0	13.0	19.0	20.0	32.0	24.0	22.0
21	---	---	---	4.0	6.0	7.0	14.0	18.0	20.0	30.0	24.0	25.0
22	---	10.0	---	4.0	5.0	6.0	16.0	18.0	24.0	28.0	23.0	24.0
23	---	11.0	---	4.0	5.0	7.0	17.0	17.0	22.0	26.0	22.0	25.0
24	---	12.0	---	2.0	6.0	6.0	17.0	17.0	25.0	26.0	22.0	22.0
25	---	15.0	---	2.0	4.0	8.0	17.0	19.0	24.0	25.0	23.0	21.0
26	---	14.0	---	3.0	3.0	7.0	15.0	19.0	23.0	27.0	24.0	21.0
27	---	14.0	5.0	2.0	4.0	7.0	14.0	18.0	24.0	28.0	24.0	21.0
28	---	12.0	5.0	2.0	3.0	8.0	14.0	19.0	25.0	26.0	25.0	21.0
29	---	10.0	5.0	2.0	1.0	9.0	13.0	21.0	27.0	25.0	26.0	21.0
30	---	9.0	5.0	1.0	---	8.0	12.0	22.0	24.0	26.0	29.0	21.0
31	---	---	4.0	.0	---	---	---	21.0	---	26.0	29.0	---

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	35	1260	3	63	14	631	4	124	3	68	7	149
2	40	1570	3	60	14	537	4	113	4	81	9	176
3	80	5640	50	1740	16	531	5	131	8	154	11	195
4	79	9430	125	14000	9	267	7	171	8	152	6	95
5	86	9290	70	7000	7	189	17	394	8	149	7	119
6	148	19100	30	2000	15	382	13	282	6	108	7	138
7	225	31000	25	1340	10	245	4	81	7	135	12	274
8	90	10000	20	913	5	116	3	59	6	142	9	335
9	40	3020	18	714	5	109	3	57	8	141	4	145
10	60	5360	16	575	5	102	3	56	8	138	12	418
11	180	28000	14	461	4	78	5	89	7	118	12	441
12	220	37000	12	382	4	73	9	166	7	113	11	365
13	160	22000	10	310	4	73	5	102	5	77	8	251
14	110	12000	8	257	4	77	10	273	5	74	8	238
15	60	5000	6	191	6	136	12	450	6	87	7	197
16	30	2000	5	151	8	198	69	6880	5	73	8	235
17	25	1440	5	143	10	239	87	7660	6	86	26	948
18	20	988	5	135	5	110	32	2190	5	70	33	2230
19	18	773	5	130	5	103	26	1780	7	96	83	8930
20	16	596	5	123	5	100	62	5420	8	109	95	9700
21	14	469	5	117	5	97	48	3910	8	111	69	6190
22	12	366	5	112	5	92	30	1980	8	114	104	11300
23	10	286	5	107	5	87	18	972	9	139	173	19600
24	10	292	4	83	5	85	15	688	12	239	83	7190
25	10	302	4	79	5	101	12	489	13	428	42	2950
26	8	229	3	62	20	902	5	184	22	707	23	1410
27	6	156	23	1300	90	6710	4	134	12	343	17	904
28	5	120	90	8140	40	2330	3	95	8	206	12	557
29	5	115	53	3890	27	1250	3	87	8	192	13	611
30	4	91	27	1500	12	470	3	84	---	---	32	2310
31	4	87	---	---	7	240	3	76	---	---	58	4900
TOTAL	---	207980	---	46078	---	16660	---	35177	---	4650	---	83501
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	109	12000	80	8280	16	407	16	147	18	211	9	52
2	276	36200	288	50000	18	510	16	140	17	175	10	56
3	147	15300	129	15500	15	409	14	119	12	105	12	68
4	67	5450	87	7190	15	385	17	143	9	71	13	75
5	38	3150	50	3230	14	323	18	148	8	59	11	60
6	26	1610	35	1830	15	337	15	121	11	85	9	48
7	28	1480	28	1270	16	349	17	141	11	79	11	61
8	25	1150	22	873	15	299	17	158	11	75	16	92
9	24	1080	18	646	14	271	24	248	10	64	25	159
10	43	3110	24	778	17	329	33	749	9	58	21	128
11	223	26900	16	475	18	348	30	757	8	50	19	104
12	168	15600	10	275	19	353	27	491	12	79	17	88
13	85	6100	9	239	12	239	31	475	19	139	14	64
14	47	2800	9	255	10	183	33	439	20	154	11	45
15	42	2870	9	245	12	195	30	356	21	167	13	54
16	115	13300	9	221	16	260	28	333	19	151	13	53
17	120	13000	10	220	16	250	21	219	13	92	19	73
18	95	7690	10	219	24	506	17	156	15	102	16	61
19	43	2810	12	266	26	624	13	109	17	124	11	47
20	26	1430	16	385	16	300	8	61	26	272	11	47
21	22	1040	44	2080	11	175	7	50	42	940	12	51
22	17	707	228	29000	10	143	10	89	34	625	14	61
23	13	488	270	35500	9	120	27	276	28	409	13	60
24	14	476	112	9560	8	98	25	271	29	352	15	66
25	14	442	67	4410	9	102	24	262	23	243	15	66
26	16	480	73	5220	10	107	21	216	21	198	19	85
27	14	435	70	3990	11	111	18	202	17	145	17	83
28	15	563	50	2210	11	104	16	153	16	124	14	63
29	42	2880	30	1070	14	128	14	116	14	100	14	59
30	55	3710	20	610	18	172	14	111	8	52	15	62
31	---	---	19	518	---	---	15	144	5	30	---	---
TOTAL	---	184251	---	186565	---	8137	---	7400	---	5530	---	2091

TOTAL LOAD FOR YEAR: 788020 TONS.

01639000 MONOCACY RIVER AT BRIDGEPORT, MD

LOCATION.--Lat 39°40'43", long 77°14'06", Frederick County, Hydrologic Unit 02070009, on right bank 60 ft (18 m) downstream from bridge on State Highway 97 at Bridgeport, 0.9 mi (1.4 km) upstream from Cattail Branch, 3.4 mi (5.5 km) northwest of Taneytown, 4.8 mi (7.7 km) downstream from confluence of Rock and Marsh Creeks at Pennsylvania-Maryland State line, and 52 mi (83.7 km) upstream from mouth.

DRAINAGE AREA.--173 mi² (448 km²).

PERIOD OF RECORD.--May 1942 to current year.

REVISED RECORDS.--WSP 1382: 1944(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 15, 1947. Datum of gage is 340.83 ft (103.885 m) Corps of Engineers datum. Prior to May 3, 1946, nonrecording gage and crest-stage gages at site 0.3 mi (0.5 km) downstream at datum 0.98 ft (0.299 m) lower.

REMARKS.--Records good except those for the period of no gage-height record, Mar. 18 to Apr. 15, which are fair. Occasional regulation at low flow from unknown source above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 204 ft³/s (5.777 m³/s), 16.01 in/yr (407 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,300 ft³/s (603 m³/s) June 22, 1972, gage height, 24.05 ft (7.330 m), from rating curve extended above 7,000 ft³/s (198 m³/s) on basis of slope-conveyance study; no flow July 24-29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 24, 1933, reached a stage of about 25 ft (7.6 m) present site and datum, from floodmarks, discharge, about 23,000 ft³/s (651 m³/s). Stage exceeded that of June 1889, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,800 ft³/s (130 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1600	5800	164	11.13	3.392	May 21	1430	5610	159	10.94	3.335
Mar. 22	Unknown	*9850	279	14.66	4.468						

Minimum discharge, 3.0 ft³/s (0.085 m³/s) Sept. 17, 18, 19, gage height, 1.76 ft (0.536 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2830	74	153	116	56	33	1800	1130	72	55	8.9	9.4
2	807	101	142	107	53	37	800	417	71	30	8.6	9.2
3	986	1220	124	100	52	36	500	830	89	25	7.8	7.3
4	466	363	116	93	54	37	700	328	65	23	7.2	8.0
5	1230	233	112	90	53	47	500	239	51	22	6.9	8.4
6	979	192	108	70	52	67	360	187	44	19	7.4	8.2
7	367	185	109	86	47	59	260	160	48	16	7.9	9.5
8	285	161	103	87	43	62	220	135	89	16	6.9	10
9	336	148	91	78	42	147	1200	117	83	23	6.0	8.5
10	1580	152	87	58	42	119	600	104	62	25	5.3	6.7
11	885	196	86	84	39	173	360	95	57	19	24	6.3
12	482	269	83	170	41	115	240	99	42	17	90	5.5
13	515	217	120	129	35	82	200	392	36	14	39	5.4
14	295	303	298	123	36	93	250	178	33	12	19	5.9
15	241	219	136	392	41	164	600	115	31	11	14	6.4
16	202	197	110	283	43	668	347	92	52	11	13	5.2
17	178	173	108	212	40	1600	260	80	57	10	13	3.1
18	160	151	74	210	36	500	227	160	36	9.8	13	3.1
19	142	137	89	688	35	300	189	186	31	10	12	4.0
20	128	128	79	279	38	200	162	159	29	10	13	5.5
21	119	119	71	209	45	1000	145	2710	27	9.3	13	5.7
22	108	93	73	171	60	5000	126	755	25	9.6	12	5.4
23	103	89	80	167	106	1000	116	316	23	12	11	4.8
24	175	88	90	121	91	500	108	243	22	17	9.7	4.2
25	129	88	714	113	83	400	101	227	21	15	9.4	4.7
26	184	620	399	105	74	300	91	157	20	12	8.5	6.2
27	92	679	247	87	58	220	174	120	20	9.9	7.5	12
28	89	295	195	99	43	170	382	102	19	8.7	6.3	8.4
29	104	240	160	86	42	1400	860	89	31	8.2	5.4	6.6
30	90	189	143	56	---	1000	387	78	144	7.4	5.3	6.0
31	80	---	130	70	---	806	---	73	---	7.7	5.4	---
TOTAL	14287	7319	4630	4739	1480	16329	12265	10073	1430	494.6	416.4	199.6
MEAN	461	244	149	153	51.0	527	409	325	47.7	16.0	13.4	6.65
MAX	2830	1220	714	688	106	5000	1800	2710	144	55	90	12
MIN	80	74	71	56	35	33	91	73	19	7.4	5.3	3.1
CFSM	2.67	1.41	.86	.88	.30	3.05	2.36	1.88	.28	.09	.08	.04
IN.	3.07	1.57	1.00	1.02	.32	3.51	2.64	2.17	.31	.11	.09	.04

CAL YR 1979 TOTAL 128281.0 MEAN 351 MAX 9310 MIN 16 CFSM 2.03 IN 27.58
WTR YR 1980 TOTAL 73662.6 MEAN 201 MAX 5000 MIN 3.1 CFSM 1.16 IN 15.84

01639500 BIG PIPE CREEK AT BRUCEVILLE, MD

LOCATION.--Lat 39°36'45", long 77°14'10", Carroll County, Hydrologic Unit 02070009, on left bank 300 ft (91 m) downstream from bridge on State Highway 194, 800 ft (240 m) downstream from Bruceville, 3.5 mi (5.6 km) upstream from Detour, and confluence with Little Pipe Creek.

DRAINAGE AREA.--102 mi² (264 km²).

PERIOD OF RECORD.--October 1947 to current year. Prior to December 1947, monthly discharge only, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 340 ft (104 m), from topographic map.

REMARKS.--Records good. Occasional diversion for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 112 ft³/s (3.172 m³/s), 14.91 in/yr (379 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) Sept. 26, 1975, gage height, 18.98 ft (5.785 m), from rating curve extended above 3,900 ft³/s (110 m³/s) on the basis of contracted-opening measurement at gage height 17.86 ft (5.444 m); minimum daily, 1.0 ft³/s (0.028 m³/s) Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1000	*6520	185	11.67	3.557	Oct. 10	0900	2020	57.2	5.95	1.814
Oct. 3	1030	1720	48.7	5.35	1.631	Mar. 21	1430	3180	90.0	8.13	2.478

Minimum discharge, 13 ft³/s (0.37 m³/s) Sept. 14, 15, gage height, 0.84 ft (0.256 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3240	106	94	72	75	48	427	410	109	70	42	32
2	591	116	93	71	80	44	246	254	142	62	37	24
3	799	212	87	70	66	42	207	417	108	61	36	26
4	321	137	88	68	64	42	368	206	98	63	34	24
5	461	119	88	72	61	60	208	173	90	57	33	24
6	304	114	89	70	61	80	173	155	87	54	31	28
7	209	111	91	75	64	67	155	156	139	49	28	24
8	181	106	83	75	60	76	144	141	472	55	28	22
9	306	104	77	75	59	86	493	128	128	65	28	21
10	1600	112	77	70	59	70	278	119	135	58	27	22
11	589	123	77	70	56	79	200	116	116	53	68	21
12	403	161	78	140	59	62	175	121	98	50	47	19
13	337	129	94	87	52	62	169	238	91	47	40	19
14	251	145	107	83	55	118	222	130	87	45	36	19
15	215	121	82	129	57	158	252	112	85	43	34	23
16	194	116	81	100	58	267	172	103	136	42	39	21
17	183	108	79	91	58	415	146	98	97	41	32	21
18	169	105	73	164	58	395	137	179	85	42	31	23
19	156	100	75	299	57	202	128	134	82	40	38	24
20	149	98	72	151	57	168	122	148	84	38	43	22
21	142	95	71	127	59	1350	118	616	75	38	35	21
22	134	94	74	118	85	499	110	288	72	62	32	22
23	133	93	77	117	88	277	110	192	69	67	32	20
24	180	92	78	93	82	222	105	196	66	79	31	19
25	133	92	140	90	76	212	102	206	66	49	27	19
26	125	178	112	87	71	166	98	146	62	45	26	25
27	120	157	89	85	60	145	197	128	60	41	25	22
28	123	118	81	81	54	135	238	118	58	39	24	21
29	123	106	78	79	50	546	350	111	69	40	24	20
30	112	97	76	75	---	248	192	104	147	43	23	20
31	108	---	75	75	---	412	---	106	---	52	35	---
TOTAL	12091	3565	2636	3059	1841	6753	6042	5749	3213	1590	1046	668
MEAN	390	119	85.0	98.7	63.5	218	201	185	107	51.3	33.7	22.3
MAX	3240	212	140	299	88	1350	493	616	472	79	68	32
MIN	108	92	71	68	50	42	98	98	58	38	23	19
CFSM	3.82	1.17	.83	.97	.62	2.14	1.97	1.81	1.05	.50	.33	.22
IN.	4.41	1.30	.96	1.12	.67	2.46	2.20	2.10	1.17	.58	.38	.24

CAL YR 1979 TOTAL 67886 MEAN 186 MAX 3240 MIN 32 CFSM 1.82 IN 24.76
WTR YR 1980 TOTAL 48253 MEAN 132 MAX 3240 MIN 19 CFSM 1.29 IN 17.60

01640500 OWENS CREEK AT LANTZ, MD

LOCATION.--Lat 39°40'36", long 77°27'50", Frederick County, Hydrologic Unit 02070009, on right bank 0.5 mi (0.8 km) west of Lantz Post Office (Deerfield station on Western Maryland Railway), 1.5 mi (2.4 km) south of Sabillasville, 4.5 mi (7.2 km) northwest of Thurmont, and 14.2 mi (22.8 km) upstream from mouth.

DRAINAGE AREA.--5.93 mi² (15.36 km²).

PERIOD OF RECORD.--October 1931 to current year.

REVISED RECORDS.--WSP 921: 1932(m). WSP 1202: 1935(M). WSP 1382: Drainage area. WSP 1432: 1937(M), 1943(M), 1949(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 965 ft (294 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--49 years, 9.40 ft³/s (0.266 m³/s), 21.53 in/yr (547 mm/yr), adjusted for diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,270 ft³/s (92.6 m³/s) Dec. 1, 1934, gage height, 8.4 ft (2.56 m), from rating curve extended above 750 ft³/s (21.2 m³/s) on basis of slope-area measurements at gage heights 5.11 ft (1.558 m) and 6.30 ft (1.920 m); no flow Sept. 2-11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 120 ft³/s (3.4 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	0730	171	4.84	3.12	0.951	Mar. 21	1345	*277	7.84	3.52	1.073
Oct. 3	0715	197	5.58	3.23	0.985	May 21	0745	150	4.25	3.02	0.921

Minimum discharge, 0.39 ft³/s (0.011 m³/s) Sept. 20, 23, 27, 29, 30, gage height, 1.06 ft (0.323 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	10	12	11	6.0	4.0	39	31	11	3.5	1.3	.54
2	27	14	12	10	6.0	3.8	32	24	11	3.1	1.1	1.0
3	75	18	11	9.2	6.0	4.1	27	22	10	3.1	1.1	2.2
4	35	13	10	8.9	5.5	4.1	29	19	9.0	3.0	.93	.65
5	49	12	10	8.9	5.5	6.5	22	17	8.1	2.7	.93	.54
6	38	12	9.8	8.5	5.0	5.5	20	15	8.2	2.5	.78	.55
7	32	11	9.2	8.1	5.1	4.9	18	15	8.6	2.3	.82	.54
8	27	11	8.5	7.5	5.1	5.9	17	13	9.6	4.0	.71	.49
9	40	10	7.9	7.3	5.1	5.8	53	12	7.9	3.2	.71	.49
10	62	12	7.7	9.5	5.1	5.2	30	11	10	3.3	.78	.71
11	48	12	7.5	9.9	4.8	5.5	24	11	7.2	2.6	3.2	.49
12	43	12	7.3	13	4.8	4.5	24	14	6.4	2.4	3.8	.49
13	35	11	10	8.8	4.4	4.3	23	17	5.9	2.2	1.3	.49
14	30	11	8.6	14	4.5	5.0	32	11	5.5	2.0	1.1	.49
15	27	9.7	7.2	17	4.6	5.1	28	9.8	5.7	1.9	1.7	.49
16	24	9.0	7.1	14	4.9	6.6	24	9.1	14	1.8	1.4	.49
17	22	8.4	6.6	13	4.4	30	21	8.6	6.5	1.7	1.1	.49
18	20	8.2	6.3	16	4.3	44	19	17	5.6	1.5	1.4	.54
19	19	7.8	6.1	16	4.2	24	18	14	5.1	1.4	1.4	.49
20	17	7.6	6.1	14	4.5	19	16	14	4.8	1.3	1.2	.44
21	16	7.3	5.9	13	5.2	93	15	86	4.2	2.1	1.1	.49
22	16	7.3	6.2	12	8.3	46	14	38	4.1	4.1	.89	.49
23	20	7.0	6.2	12	6.4	32	13	26	3.9	4.3	.82	.39
24	19	7.1	6.6	11	6.2	28	12	33	3.7	2.4	.78	.44
25	15	7.2	48	10	5.5	26	12	24	3.4	1.8	.76	.71
26	14	33	21	9.5	4.8	20	11	19	3.3	1.6	.71	.97
27	14	19	17	9.8	4.2	18	19	16	3.2	1.5	.65	.39
28	15	16	15	8.5	4.3	19	27	15	3.2	1.4	.65	.49
29	13	15	13	7.8	4.0	44	25	13	7.9	1.6	.54	.39
30	11	13	13	7.5	---	28	24	12	5.6	1.4	.54	.39
31	10	---	12	6.7	---	39	---	12	---	1.6	.68	---
TOTAL	888	351.6	334.8	332.4	148.7	590.8	688	598.5	202.6	73.3	34.88	17.76
MEAN	28.6	11.7	10.8	10.7	5.13	19.1	22.9	19.3	6.75	2.36	1.13	.59
MAX	75	33	48	17	8.3	93	53	86	14	4.3	3.8	2.2
MIN	10	7.0	5.9	6.7	4.0	3.8	11	8.6	3.2	1.3	.54	.39
CFSM	4.82	1.97	[illegible]	1.80	.87	3.22	3.86	3.26	1.14	.40	.19	.10
IN.	5.57	2.21	2.10	2.08	.93	3.71	4.32	3.75	1.27	.46	.22	.11

CAL YR 1979 TOTAL 6927.00 MEAN 19.0 MAX 360 MIN 1.3 CFSM 3.20 IN 43.45
WTR YR 1980 TOTAL 4261.34 MEAN 11.6 MAX 93 MIN .39 CFSM 1.96 IN 26.73

01641000 HUNTING CREEK AT JIMTOWN, MD

LOCATION.--Lat 39°35'40", long 77°23'50", Frederick County, Hydrologic Unit 02070009, on right bank just downstream from highway bridge, 0.4 mi (0.6 km) southwest of Jimtown, about 2.2 mi (3.5 km) southeast of Thurmont, 2.2 mi (3.5 km) upstream from Little Hunting Creek, and 5.2 mi (8.4 km) upstream from mouth.

DRAINAGE AREA.--18.4 mi^2 (47.7 km^2).

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WSP 1332: 1952.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 355 ft (108 m), from topographic map.

REMARKS.--Records good. Slight regulation at irregular intervals caused by pumpage at recreation camp near Foxville, and from occasional draining and refilling of pond near Thurmont by Maryland Game and Inland Fish Commission. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 26.8 ft^3/s (0.759 m^3/s), 19.78 in/yr (502 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,670 ft^3/s (75.6 m^3/s) Oct. 9,, 1976, gage height, 6.32 ft (1.926 m); minimum, 0.4 ft^3/s (0.011 m^3/s) Sept. 9, 1966, gage height, 1.48 ft (0.451 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft^3/s (9.9 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 1	0900	518	14.7	3.44	1.049	Apr. 9	0430	453	12.8	3.30	1.006
Oct. 10	1430	355	10.1	3.07	.936	May 21	0830	513	14.5	3.43	1.045
Mar. 21	1330	*1460	41.3	4.96	1.512						

Minimum discharge, 2.4 ft^3/s (0.068 m^3/s) Aug. 27, Sept. 4, gage height, 1.57 ft (0.479 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	26	28	25	22	11	133	86	26	10	4.1	2.9
2	49	36	26	25	22	11	99	71	25	8.6	4.0	3.7
3	117	39	26	24	20	11	83	66	25	8.1	3.4	4.8
4	85	30	26	23	20	12	93	54	22	7.5	3.3	2.8
5	121	28	26	24	21	16	73	47	20	6.7	3.7	3.3
6	96	28	26	23	21	14	61	42	20	6.3	3.7	4.2
7	76	27	26	22	21	13	55	40	21	5.8	3.8	4.2
8	66	26	25	22	20	14	53	36	27	8.6	3.6	3.7
9	110	26	24	22	21	12	191	33	22	8.7	3.4	3.7
10	293	28	25	22	21	11	107	31	25	9.5	3.4	4.2
11	188	29	24	22	21	12	83	29	19	7.4	4.2	4.2
12	127	29	23	26	20	10	75	31	17	6.3	4.8	4.2
13	99	29	29	22	20	12	71	39	14	5.6	3.6	4.1
14	79	29	25	32	19	18	93	31	13	4.9	3.3	4.1
15	70	28	24	33	19	26	92	27	13	4.8	3.9	4.1
16	63	29	24	28	21	25	76	24	27	4.6	3.5	3.7
17	60	26	23	26	19	51	65	22	18	4.4	3.2	3.7
18	56	25	23	37	19	52	59	41	15	4.0	3.8	4.2
19	54	25	23	39	19	36	54	33	15	3.9	4.5	4.2
20	53	24	23	33	18	32	50	32	17	3.9	3.9	4.0
21	44	24	22	32	19	479	46	282	16	4.9	3.6	4.1
22	33	24	22	32	25	181	42	95	12	7.9	3.4	4.2
23	37	24	22	30	19	109	39	62	9.4	8.0	3.3	5.3
24	36	23	23	29	15	87	37	58	8.8	6.3	3.3	4.8
25	32	23	62	29	14	79	35	57	8.6	5.2	3.0	7.2
26	30	48	37	28	13	64	33	48	8.2	4.7	2.9	5.9
27	29	35	32	26	12	55	53	42	7.8	4.3	2.8	4.8
28	30	32	30	26	12	54	70	37	7.5	4.3	2.8	4.2
29	29	29	29	24	11	142	75	32	14	4.4	2.8	3.7
30	28	28	28	25	---	91	64	29	15	4.3	2.9	3.7
31	27	---	26	24	---	129	---	28	---	4.3	3.7	---
TOTAL	2353	857	832	835	544	1869	2160	1585	508.3	188.2	109.6	125.9
MEAN	75.9	28.6	26.8	26.9	18.8	60.3	72.0	51.1	16.9	6.07	3.54	4.20
MAX	293	48	62	39	25	479	191	282	27	10	4.8	7.2
MIN	27	23	22	22	11	10	33	22	7.5	3.9	2.8	2.8
CFSM	4.13	1.55	1.46	1.46	1.02	3.28	3.91	2.78	.92	.33	.19	.23
IN.	4.76	1.73	1.68	1.69	1.10	3.78	4.37	3.20	1.03	.38	.22	.25

CAL YR 1979 TOTAL 17226.8 MEAN 47.2 MAX 1090 MIN 5.6 CFSM 2.57 IN 34.83
WTR YR 1980 TOTAL 11967.0 MEAN 32.7 MAX 479 MIN 2.8 CFSM 1.78 IN 24.19

01641500 FISHING CREEK NEAR LEWISTOWN, MD

LOCATION.--Lat 39°31'35", long 77°28'00", Frederick County, Hydrologic Unit 02070009, on left bank immediately upstream from Fishing Creek Reservoir, 50 ft (15 m) downstream from Little Fishing Creek, 2.8 mi (4.5 km) west of Lewistown, and 9.9 mi (15.9 km) upstream from mouth.

DRAINAGE AREA.--7.29 mi^2 (18.88 km^2).

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 1432: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 735 ft (224 m), from topographic map.

REMARKS.--Records good except those above 60 ft^3/s (1.7 m^3/s), which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 11.8 ft^3/s (0.334 m^3/s), 21.98 in/yr (558 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,200 ft^3/s (62.3 m^3/s) Oct. 9, 1976, gage height, 5.75 ft (1.753 m), from rating curve extended above 100 ft^3/s (2.83 m^3/s) on basis of slope-area measurement at gage height 3.73 ft (1.137 m), and computation of flow over dam at gage height, 5.75 ft (1.753 m); minimum, 0.6 ft^3/s (0.017 m^3/s) Sept. 10, 11, 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 146 ft^3/s (4.13 m^3/s) Mar. 21, gage height, 2.55 ft (0.777 m), no other peaks above base of 100 ft^3/s (2.8 m^3/s); minimum, 1.3 ft^3/s (0.037 m^3/s) Sept. 24, 25, gage height, 1.14 ft (0.347 m)

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	14	14	14	14	7.1	51	35	19	7.1	3.3	1.8
2	26	15	13	14	13	7.1	50	34	19	6.7	3.2	1.7
3	40	18	13	13	13	7.0	46	34	18	6.4	3.0	2.7
4	38	14	13	13	12	6.8	47	33	16	6.2	2.9	1.8
5	44	14	13	13	12	8.4	40	31	16	5.8	3.3	1.7
6	43	13	13	13	12	8.1	35	29	19	5.6	3.0	1.9
7	40	13	13	12	11	7.6	32	27	19	5.1	2.7	2.4
8	36	13	12	12	11	7.6	29	25	21	6.3	2.5	1.8
9	44	13	11	11	10	7.6	51	23	17	6.5	2.5	1.7
10	69	14	11	11	10	7.6	44	21	17	7.1	3.4	1.7
11	67	14	11	12	10	7.6	42	20	16	5.3	5.2	1.7
12	65	14	11	14	9.7	7.2	39	20	14	5.1	3.0	1.7
13	60	13	12	11	9.3	7.5	37	20	13	4.8	2.8	1.7
14	53	14	11	13	9.3	8.5	38	20	13	4.5	2.6	1.7
15	46	13	9.9	17	9.3	8.2	38	18	12	4.3	2.7	1.7
16	41	12	9.7	15	9.3	9.4	34	17	16	4.2	2.6	1.7
17	35	12	9.4	15	9.0	18	31	16	13	4.1	2.3	1.7
18	31	12	9.0	17	8.4	28	30	21	12	4.0	2.4	1.8
19	28	12	8.8	20	8.0	24	29	19	11	3.8	2.8	1.7
20	26	12	8.8	18	8.0	23	27	17	11	3.7	2.8	1.5
21	24	11	8.8	18	8.0	82	25	54	10	3.8	2.7	1.6
22	22	11	8.8	18	10	71	24	50	9.6	6.3	2.5	1.7
23	22	11	8.8	19	9.0	57	22	46	9.2	7.3	2.5	1.5
24	22	11	8.8	18	8.6	49	21	39	8.8	4.6	2.3	1.4
25	19	11	23	18	8.2	43	20	35	8.7	4.0	2.3	1.8
26	18	18	16	17	7.8	35	19	31	8.0	3.7	2.2	1.9
27	17	15	15	16	7.6	30	24	29	7.9	3.3	2.0	1.6
28	17	14	14	16	7.6	28	24	26	7.6	3.1	2.0	1.5
29	16	14	14	15	7.2	43	30	24	8.0	3.2	1.8	1.4
30	15	14	14	15	---	37	28	22	8.3	3.1	1.8	1.4
31	14	---	14	14	---	46	---	21	---	3.2	1.8	---
TOTAL	1074	399	371.8	462	282.3	737.3	1007	857	398.1	152.2	82.9	51.9
MEAN	34.6	13.3	12.0	14.9	9.73	23.8	33.6	27.6	13.3	4.91	2.67	1.73
MAX	69	18	23	20	14	82	51	54	21	7.3	5.2	2.7
MIN	14	11	8.8	11	7.2	6.8	19	16	7.6	3.1	1.8	1.4
CFSM	4.75	1.82	1.65	2.04	1.34	3.27	4.61	3.79	1.82	.67	.37	.24
IN.	5.48	2.04	1.90	2.36	1.44	3.76	5.14	4.37	2.03	.78	.42	.26

CAL YR 1979 TOTAL 7068.2 MEAN 19.4 MAX 194 MIN 2.1 CFSM 2.66 IN 36.06
WTR YR 1980 TOTAL 5875.5 MEAN 16.1 MAX 82 MIN 1.4 CFSM 2.21 IN 29.98

01642500 LINGANORE CREEK NEAR FREDERICK, MD

LOCATION.--Lat 39°24'55", long 77°20'00", Frederick County, Hydrologic Unit 02070009, on left bank 2.4 mi (3.9 km) upstream from mouth and 4.0 mi (6.4 km) east of Frederick.

DRAINAGE AREA.--82.3 mi² (213.2 km²).

PERIOD OF RECORD.--November 1931 to March 1932, September 1934 to current year.

REVISED RECORDS.--WSP 891: 1938-39. WSP 1432: 1934, 1936, 1937(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 23, 1946. Altitude of gage is 270 ft (82 m), from topographic map. Prior to Mar. 27, 1932, nonrecording gage at Frederick pumping station, 1.5 mi (2.4 km) downstream at datum about 20 ft (6.1 m) lower. Sept. 12, 1934, to Sept. 25, 1946, nonrecording gage at present site and datum.

REMARKS.--Records good. Occasional regulation by Linganore Reservoir 0.5 mi (0.8 km) upstream beginning September 1972, total capacity, 883,200,000 gal (3.343 hm³). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years, 87.0 ft³/s (2.464 m³/s), 14.36 in/yr (365 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,100 ft³/s (569 m³/s) June 22, 1972, gage height, 19.46 ft (5.931 m), from high-water mark in well, from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurement at gage height 10.01 ft (3.051 m) and contracted-opening measurement at gage height 19.46 ft (5.931 m) at site 2.6 mi (4.2 km) upstream, adjusted for flow from intervening area; minimum discharge, 1.4 ft³/s (0.040 m³/s) Nov. 24, 1972, gage height, 1.10 ft (0.335 m), result of regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s (39 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1345	*7090	201	13.34	4.066	Oct. 10	0915	1700	48.1	6.83	2.082

Minimum discharge, 7.5 ft³/s (0.21 m³/s) May 14, 15; minimum daily, 7.7 ft³/s (0.22 m³/s) May 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2070	105	79	62	55	61	239	143	105	51	29	16
2	486	111	78	61	55	61	277	207	96	47	30	13
3	432	168	75	60	57	67	329	90	96	48	27	13
4	278	126	75	61	78	75	320	90	107	49	28	12
5	307	109	76	65	86	71	169	91	84	45	26	17
6	267	104	75	58	104	53	104	110	84	46	25	32
7	204	101	75	62	104	44	118	114	106	41	23	21
8	151	98	71	62	105	43	179	112	167	47	20	15
9	216	96	68	60	105	43	203	100	108	55	17	13
10	1080	102	67	56	105	57	204	98	96	62	19	13
11	516	114	68	61	104	76	202	98	86	47	35	11
12	377	148	67	123	103	89	200	98	77	42	34	11
13	326	123	81	82	102	93	198	99	72	40	27	11
14	254	127	90	77	101	118	257	48	70	37	22	10
15	226	111	73	105	101	202	287	7.7	68	35	24	11
16	204	108	69	88	100	289	125	7.9	111	34	31	11
17	144	100	67	80	99	163	154	8.0	87	34	23	11
18	180	97	61	113	98	101	149	9.4	71	33	24	17
19	166	92	64	244	97	100	147	51	68	30	34	16
20	157	89	63	134	92	112	135	117	63	30	36	13
21	148	86	62	115	90	436	133	327	61	28	29	13
22	143	84	64	106	101	458	130	191	60	61	24	14
23	144	84	65	107	83	367	123	133	56	104	23	12
24	179	83	67	88	24	357	113	398	55	53	22	11
25	138	82	102	87	15	277	94	276	57	40	18	16
26	127	126	90	81	19	157	84	163	55	36	16	18
27	121	126	73	76	30	143	122	136	52	34	15	14
28	125	96	68	74	45	219	253	122	50	30	14	12
29	122	87	66	73	54	347	296	108	52	32	13	12
30	112	81	65	65	---	222	165	99	58	31	13	11
31	107	---	64	65	---	208	---	106	---	28	15	---
TOTAL	10361	3164	2228	2651	2312	5109	5504	3762.0	2378	1330	736	420
MEAN	334	105	71.9	85.5	79.7	165	183	121	79.3	42.9	23.7	14.0
MAX	2070	168	102	244	105	458	329	398	167	104	36	32
MIN	107	81	61	56	15	43	84	7.7	50	28	13	10
CFSM	4.06	1.28	.87	1.04	.97	2.01	2.22	1.47	.96	.52	.29	.17
IN.	4.68	1.43	1.01	1.20	1.05	2.31	2.49	1.70	1.07	.60	.33	.19

CAL YR 1979 TOTAL 59407.0 MEAN 163 MAX 2070 MIN 28 CFSM 1.98 IN 26.85
WTR YR 1980 TOTAL 39955.0 MEAN 109 MAX 2070 MIN 7.7 CFSM 1.32 IN 18.06

01643000 MONOCACY RIVER AT JUG BRIDGE NEAR FREDERICK, MD

LOCATION.--Lat 39°24'13", long 77°21'58", Frederick County, Hydrologic Unit 02070009, on right bank 0.2 mi (0.3 km) upstream from Jug Bridge on U.S. Highway 40, 0.4 mi (0.6 km) downstream from Linganore Creek, 2.0 mi (3.2 km) east of Frederick, and 16.9 mi (27.2 km) upstream from mouth.

DRAINAGE AREA.--817 mi² (2,116 km²).

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for October, November 1929, published in WSP 1302.

REVISED RECORDS.--WSP 711: 1930.

GAGE.--Water-stage recorder. Nonrecording gage at site 0.2 mile (0.3 km) downstream. Datum of gage is 231.92 ft (70.689 m) Corps of Engineers datum.

REMARKS.--Records good. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--51 years, 934 ft³/s (26.45 m³/s), 15.52 in/yr (394 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,600 ft³/s (2,310 m³/s) June 23, 1972, gage height, 35.9 ft (10.94 m), from floodmark; minimum daily, 19 ft³/s (0.54 m³/s) Sept. 7-13, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1889 reached a stage of 30 ft (9.1 m), from floodmarks, discharge, 56,000 ft³/s (1,590 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,800 ft³/s (250 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 2	0445	20100	569	16.57	5.051	Mar. 22	0800	*21800	617	17.34	5.285
Oct. 10	2100	12400	351	12.57	3.831	May 22	0130	10300	292	11.28	3.438

Minimum discharge, 85 ft³/s (2.41 m³/s) Sept. 14, 16, 17, gage height, 1.21 ft (0.369 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10100	696	811	651	500	307	6890	3160	710	550	185	111
2	11600	706	759	615	500	314	3370	2730	725	361	174	120
3	4310	2030	709	587	480	361	2610	2600	720	313	161	109
4	3840	1960	665	566	500	374	2920	1900	720	315	154	115
5	3040	1120	654	560	480	442	2510	1370	590	301	147	120
6	5030	946	645	505	480	480	1630	1190	545	286	144	164
7	2400	886	639	496	460	463	1420	1120	621	260	136	127
8	1820	843	616	559	460	438	1360	1030	1250	273	127	109
9	2350	799	570	524	467	489	4840	917	963	311	116	103
10	8780	790	541	447	464	575	4490	836	695	352	134	100
11	7610	867	537	493	443	538	2460	788	675	301	173	95
12	3760	1100	530	776	459	604	1850	782	560	261	190	93
13	3340	1070	571	794	414	511	1750	1080	496	240	291	90
14	2460	1100	853	696	417	580	1840	1160	461	222	228	87
15	1930	1070	754	1290	447	868	3270	725	443	206	184	88
16	1660	916	595	1310	449	1730	1920	618	680	198	176	86
17	1500	861	569	972	410	2920	1540	563	691	193	162	90
18	1370	799	501	1010	394	5720	1360	754	515	189	155	98
19	1250	748	480	2780	404	2670	1250	1070	450	182	163	97
20	1160	710	488	1660	418	1660	1140	1100	436	176	180	96
21	1080	680	469	1210	420	7000	1050	4630	411	171	182	93
22	1010	648	465	1040	491	16600	979	6020	377	272	161	94
23	962	620	478	1000	593	3700	904	2120	359	400	151	94
24	1160	607	499	875	534	2670	857	1960	343	314	141	88
25	1080	601	1150	760	483	2620	803	2000	333	269	129	106
26	905	794	2190	700	453	2020	754	1340	317	221	124	105
27	830	2530	1100	650	413	1540	996	1070	305	201	115	102
28	812	1300	893	650	382	1420	1710	927	292	187	109	102
29	830	1030	801	600	354	5280	3210	838	301	183	100	98
30	789	898	742	600	---	4220	2040	764	511	181	98	96
31	730	---	696	550	---	3200	---	721	---	177	120	---
TOTAL	89498	29725	21970	25926	13169	72314	63723	47883	16495	8066	4810	3076
MEAN	2887	991	709	836	454	2333	2124	1545	550	260	155	103
MAX	11600	2530	2190	2780	593	16600	6890	6020	1250	550	291	164
MIN	730	601	465	447	354	307	754	563	292	171	98	86
CFSM	3.53	1.21	.87	1.02	.56	2.86	2.60	1.89	.67	.32	.19	.13
IN.	4.08	1.35	1.00	1.18	.60	3.29	2.90	2.18	.75	.37	.22	.14

CAL YR 1979 TOTAL 624536 MEAN 1711 MAX 25200 MIN 202 CFSM 2.09 IN 28.44
WTR YR 1980 TOTAL 396655 MEAN 1084 MAX 16600 MIN 86 CFSM 1.33 IN 18.06

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD

LOCATION.--Lat 39°23'16", long 77°22'40", Frederick County, Hydrologic Unit 02070009, at Reich's Ford Bridge, 1.1 mi (1.8 km) downstream from U.S. Highway 40, 1.2 mi (1.9 km) downstream from gaging station, 2 mi (3.2 km) southeast of Frederick, and 15.0 mi (25.1 km), upstream from mouth.

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1960 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1960 to current year.

REMARKS.--Water temperatures are measured daily in field at time of sample. Water-discharge records for Monocacy River at Jug Bridge near Frederick (station 01643000) are used for computation of sediment loads. Prior to 1970, published as Monocacy River at Jug Bridge near Frederick (station 01643000).

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1961-72, 1975, 1977, 1980): Maximum daily, 32.0°C July 21, 1980; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,000 mg/L July 10, 1970; minimum daily mean, 1 mg/L on many days in 1961-67, 1970, and 1972.
SEDIMENT LOADS: Maximum daily, 134,000 tons (122,000 tonnes) June 22, 1972; minimum daily, less than 0.50 ton (0.45 tonne) on many days in 1961-67.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES:--Maximum daily, 32.0°C July 21; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 597 mg/L Mar. 22; minimum daily mean, 2 mg/L Nov. 23.
SEDIMENT LOADS: Maximum daily, 30,300 tons (27,500 tonnes) Mar. 22; minimum daily, 3.3 tons (3.0 tonnes) Nov. 23.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	12.0	4.0	1.0	1.0	1.0	8.0	13.0	24.0	25.0	26.0	29.0
2	18.0	13.0	4.0	2.0	.0	2.0	10.0	15.0	24.0	26.0	29.0	30.0
3	17.0	12.0	4.0	3.0	.0	4.0	11.0	18.0	22.0	25.0	29.0	28.0
4	17.0	12.0	5.0	1.0	2.0	4.0	12.0	19.0	22.0	26.0	30.0	---
5	17.0	10.0	5.0	1.0	3.0	4.0	12.0	19.0	21.0	27.0	31.0	28.0
6	16.0	10.0	5.0	1.0	1.0	6.0	12.0	19.0	20.0	27.0	29.0	27.0
7	14.0	9.0	5.0	1.0	3.0	5.0	13.0	19.0	24.0	24.0	31.0	27.0
8	14.0	10.0	6.0	3.0	1.0	10.0	13.0	17.0	23.0	22.0	31.0	27.0
9	14.0	10.0	4.0	2.0	1.0	6.0	14.0	15.0	21.0	25.0	29.0	25.0
10	11.0	11.0	4.0	2.0	2.0	10.0	12.0	18.0	19.0	26.0	29.0	---
11	11.0	10.0	7.0	2.0	3.0	6.0	12.0	17.0	20.0	27.0	29.0	21.0
12	11.0	10.0	8.0	2.0	2.0	7.0	12.0	19.0	18.0	28.0	29.0	20.0
13	11.0	10.0	7.0	.0	3.0	3.0	14.0	21.0	21.0	27.0	28.5	26.0
14	10.0	8.0	7.0	2.0	4.0	3.0	12.0	19.0	20.0	27.0	29.0	25.0
15	11.0	8.0	5.0	4.0	2.0	3.0	12.0	18.0	22.0	27.0	25.0	24.0
16	12.0	9.0	4.0	4.0	3.0	6.0	11.0	20.0	20.0	29.0	24.0	20.0
17	13.0	9.0	2.0	4.0	2.0	6.0	10.0	19.0	21.0	29.0	24.0	21.0
18	15.0	9.0	2.0	4.0	3.0	6.0	11.0	18.0	22.0	29.0	22.0	22.0
19	15.0	9.0	2.0	5.0	2.0	8.0	15.0	18.0	21.0	30.0	22.0	25.0
20	16.0	11.0	1.0	5.0	5.0	9.0	17.0	18.0	21.0	31.0	23.0	23.0
21	17.0	10.0	2.0	4.0	5.0	9.0	18.0	17.0	22.0	32.0	23.0	22.0
22	19.0	11.0	3.0	4.0	4.0	6.0	16.0	17.0	24.0	30.0	24.0	26.0
23	17.0	10.0	5.0	4.0	5.0	5.0	18.0	19.0	24.0	25.0	25.0	25.0
24	13.0	12.0	6.0	1.0	7.0	7.0	16.0	19.0	24.0	27.0	26.0	24.0
25	12.0	12.0	8.0	.0	7.0	8.0	16.0	20.0	25.0	26.0	27.0	20.0
26	10.0	15.0	7.0	3.0	6.0	8.0	13.0	20.0	24.0	29.0	27.0	22.0
27	10.0	14.0	6.0	2.0	4.0	7.0	13.0	20.0	25.0	27.0	28.0	20.0
28	10.0	10.0	4.0	3.0	3.0	9.0	21.0	21.0	27.0	27.0	---	20.0
29	11.0	8.0	5.0	3.0	.0	9.0	21.0	21.0	26.0	27.0	29.0	20.0
30	12.0	5.0	4.0	1.0	---	8.0	22.0	22.0	25.0	26.0	30.0	19.0
31	10.0	---	4.0	1.0	---	9.0	---	23.0	---	26.0	28.0	---

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	209	9770	3	5.6	9	20	4	7.0	6	8.1	10	8.3
2	318	14000	6	11	7	14	4	6.6	7	9.5	11	9.3
3	137	1820	56	388	7	13	3	4.8	7	9.1	9	8.8
4	172	2010	41	236	7	13	4	6.1	7	9.5	6	6.1
5	134	1290	10	30	5	8.8	6	9.1	8	10	7	8.4
6	202	3040	5	13	5	8.7	16	22	7	9.1	7	9.1
7	45	292	4	9.6	5	8.6	16	21	10	12	5	6.3
8	22	108	4	9.1	5	8.3	8	12	6	7.5	8	9.4
9	50	317	4	8.6	6	9.2	5	7.1	8	10	8	11
10	235	6050	4	8.5	4	5.8	4	4.8	18	23	8	12
11	82	1960	5	12	4	5.8	5	6.7	9	11	8	12
12	29	294	6	18	4	5.7	9	19	8	9.9	9	15
13	20	180	5	14	6	9.3	10	21	7	7.8	8	11
14	14	93	5	15	7	16	7	13	7	7.9	13	20
15	13	68	4	12	6	12	22	77	6	7.2	17	41
16	10	45	5	12	6	9.6	22	78	6	7.3	100	467
17	9	36	5	12	5	7.7	10	26	5	5.5	207	1630
18	10	37	4	8.6	6	8.1	14	38	6	6.4	399	6550
19	12	40	3	6.1	7	9.1	90	698	4	4.4	98	759
20	11	34	3	5.8	11	14	38	170	5	5.6	35	157
21	10	29	3	5.5	18	23	30	98	7	7.9	400	11900
22	10	27	2	3.5	13	16	9	25	9	12	597	30300
23	11	29	2	3.3	6	7.7	8	22	9	14	134	1380
24	12	38	3	4.9	4	5.4	8	19	8	12	75	541
25	6	17	7	11	29	123	9	18	7	9.1	85	601
26	3	7.3	9	19	53	326	7	13	7	8.6	57	311
27	3	6.7	41	292	22	65	6	11	5	5.6	36	150
28	3	6.6	17	60	10	24	5	9.0	6	6.2	30	115
29	4	9.0	9	25	7	15	7	11	9	8.6	361	6460
30	3	6.4	5	12	6	12	6	10	---	---	160	2120
31	4	7.9	---	---	5	9.4	7	10	---	---	67	560
TOTAL	---	41667.9	---	1271.1	---	833.2	---	1493.2	---	264.8	---	64188.7
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	159	3130	119	1130	25	48	97	144	21	10	33	11
2	62	507	84	711	37	72	37	36	24	11	36	13
3	35	247	108	802	48	93	25	21	27	12	47	15
4	73	605	57	292	38	74	24	20	23	9.6	44	15
5	67	484	40	148	38	61	22	18	18	7.1	34	12
6	25	113	35	112	55	80	20	15	14	5.4	51	23
7	17	65	25	76	125	210	23	16	14	5.1	47	17
8	25	91	21	58	228	769	34	841	11	3.8	44	14
9	237	4490	17	42	257	668	37	705	10	3.1	34	9.5
10	210	3000	15	34	110	206	48	46	12	4.3	32	8.6
11	58	381	14	30	62	113	67	54	26	12	32	8.2
12	31	155	15	32	46	70	40	28	31	16	30	7.5
13	32	151	30	87	38	51	32	21	40	31	25	6.1
14	43	214	72	226	33	41	30	18	34	21	22	5.2
15	98	865	48	94	34	41	27	15	29	14	23	5.5
16	38	197	27	45	141	259	25	13	22	10	26	6.0
17	22	91	20	30	174	325	24	13	20	8.7	27	6.6
18	16	59	36	73	86	120	22	11	20	8.4	27	7.1
19	17	57	42	121	60	73	21	10	19	8.4	23	6.0
20	16	49	80	238	42	49	19	9.0	24	12	23	6.0
21	18	51	334	5660	36	40	19	8.8	32	16	17	4.3
22	20	53	271	5820	31	32	31	23	31	13	21	5.3
23	20	49	62	355	27	26	62	67	29	12	21	5.3
24	19	44	90	476	16	15	55	47	30	11	21	5.0
25	17	37	95	510	13	12	43	31	27	9.4	29	8.3
26	18	37	62	224	13	11	26	16	28	9.9	27	7.7
27	31	83	46	133	12	9.9	22	12	29	9.7	24	6.6
28	55	254	36	90	13	10	22	11	27	8.7	21	5.8
29	142	1270	36	81	17	14	23	11	26	7.9	22	5.8
30	55	303	28	58	83	115	25	12	31	9.3	30	7.8
31	---	---	24	47	---	---	23	11	---	---	---	---
TOTAL	---	17209	---	17835	---	3707.9	---	2303.8	---	319.8	---	264.2

TOTAL LOAD FOR YEAR: 151358.6 TONS.

01643500 BENNETT CREEK AT PARK MILLS, MD

LOCATION.--Lat 39°17'40", long 77°24'30", Frederick County, Hydrologic Unit 02070009, on left bank 75 ft (23 m) downstream from highway bridge, 0.2 mi (0.3 km) south of Park Mills, 1.8 mi (2.9 km) upstream from mouth, and 3.7 mi (6.0 km) southwest of Urbana.

DRAINAGE AREA.--62.8 mi² (162.7 km²).

PERIOD OF RECORD.--July 1948 to September 1958. Annual maximum, water years 1960-66. August 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 240 ft (73.2 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years (water years 1949-58, 1967-80), 72.5 ft³/s (2.053 m³/s) 15.67 in/yr (398 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft³/s (912 m³/s) June 21, 1972, gage height, 22.1 ft (6.74 m), from floodmark, from rating curve extended above 2,700 ft³/s (76.5 m³/s) on basis of contracted-opening measurements at gage heights 11.15 ft (3.399 m), 14.33 ft (4.368 m), and 22.1 ft (6.74 m); minimum, 0.30 ft³/s (0.008 m³/s) Sept. 8, 1966, gage height, 0.80 ft (0.244 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1245	*4240	120	9.08	2.768	Mar. 21	1500	1240	35.1	5.16	1.573
Oct. 10	0830	1450	41.1	5.56	1.695	May 24	1730	3320	94.0	8.24	2.512

Minimum daily discharge, 10 ft³/s (0.28 m³/s) Sept. 14, 15, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1280	100	77	57	58	51	294	249	84	39	36	13
2	297	110	76	57	54	45	200	154	76	37	35	12
3	291	150	72	56	51	45	166	164	79	42	28	14
4	196	110	73	56	52	46	159	121	83	40	27	12
5	286	100	72	59	51	73	131	104	66	36	26	18
6	210	100	72	58	51	74	114	92	65	35	23	15
7	171	100	71	56	51	62	104	86	91	32	21	12
8	149	95	68	55	51	63	97	83	65	43	21	13
9	194	100	65	55	54	61	265	75	57	43	20	13
10	858	140	64	55	55	55	155	70	62	38	19	20
11	428	160	64	60	53	58	124	70	56	35	35	15
12	361	200	64	112	53	52	112	71	54	32	23	13
13	294	130	79	70	48	56	105	88	53	31	21	11
14	231	120	77	76	49	95	114	63	51	28	19	10
15	202	100	65	94	53	152	123	58	52	28	21	10
16	184	100	65	77	56	147	97	55	69	28	27	11
17	170	95	62	72	53	157	88	55	54	27	20	13
18	158	90	59	164	53	167	84	105	50	27	24	20
19	146	85	61	253	52	118	80	111	49	25	30	15
20	139	85	60	131	51	104	76	149	46	24	26	13
21	132	85	59	108	53	592	75	458	45	23	23	12
22	126	85	59	101	68	277	72	171	44	68	21	12
23	136	85	59	103	62	179	69	122	44	60	21	11
24	163	84	60	83	63	146	68	678	43	41	21	10
25	123	82	96	83	58	130	68	232	43	31	19	16
26	120	147	75	78	54	106	71	139	41	28	16	13
27	110	107	65	73	51	94	155	109	40	27	15	12
28	120	92	61	72	51	91	226	93	39	26	14	11
29	110	84	60	69	50	311	212	85	46	31	14	11
30	100	80	59	67	---	171	136	76	51	31	14	11
31	100	---	58	63	---	291	---	139	---	29	13	---
TOTAL	7585	3201	2077	2573	1559	4069	3840	4325	1698	1065	693	392
MEAN	245	107	67.0	83.0	53.8	131	128	140	56.6	34.4	22.4	13.1
MAX	1280	200	96	253	68	592	294	678	91	68	36	20
MIN	100	80	58	55	48	45	68	55	39	23	13	10
CFSM	3.90	1.70	1.07	1.32	.86	2.09	2.04	2.23	.90	.55	.36	.21
IN.	4.49	1.90	1.23	1.52	.92	2.41	2.27	2.56	1.01	.63	.41	.23

CAL YR 1979 TOTAL 48812 MEAN 134 MAX 2000 MIN 22 CFSM 2.13 IN 28.91
WTR YR 1980 TOTAL 33077 MEAN 90.4 MAX 1280 MIN 10 CFSM 1.44 IN 19.59

01645000 SENECA CREEK AT DAWSONVILLE, MD

LOCATION.--Lat 39°07'41", long 77°20'13", Montgomery County, Hydrologic Unit 02070008, on right bank 60 ft (18 m) downstream from bridge on State Highway 28, 150 ft (46 m) downstream from mouth of Great Seneca Creek, 0.5 mi (0.8 km) east of Dawsonville, and 5.8 mi (9.3 km) upstream from mouth.

DRAINAGE AREA.--101 mi² (262 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1930 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1232: 1930. WSP 1272: 1933. WSP 1432: 1934-35(M), 1941(M). WDR MD-DE-74-1: 1970(M).

GAGE.--Water-stage recorder. Concrete control since Mar. 3, 1934. Datum of gage is 214.02 ft (65.233 m) National Geodetic Vertical Datum of 1929. Sept. 26 to Nov. 9, 1930, chain gage, and Nov. 10, 1930, to Apr. 6, 1934, water-stage recorder, at highway bridge 60 ft (18 m) upstream at same datum.

REMARKS.--Water-discharge records good. Small diversion at times for irrigation above station.

AVERAGE DISCHARGE.--50 years, 103 ft³/s (2.917 m³/s), 13.85 in/yr (352 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,100 ft³/s (739 m³/s) June 22, 1972, gage height, 16.4 ft (5.00 m), from high-water mark in gage house, from rating curve extended above 3,000 ft³/s (850 m³/s) on basis of contracted-opening and flow-over-road measurement at gage height 12.17 ft (3.709 m) at gage; and contracted-opening and flow-over-road measurement at gage height 16.32 ft (4.974 m) at site 5.0 mi (8.0 km) downstream, adjusted for flow from intervening area; minimum observed, 1.7 ft³/s (0.048 m³/s) Sept. 28, 29, 1930, gage height, 0.56 ft (0.171 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1300	*10800	306	10.95	3.338	Mar. 21	1530	1510	42.8	6.08	1.853
Oct. 10	1015	3210	90.9	8.06	2.457						

Minimum discharge, 29 ft³/s (0.82 m³/s) Sept. 16, 24, minimum gage height, 1.92 ft (0.585 m) Sept. 2, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4910	142	127	101	100	82	482	429	140	83	62	34
2	658	153	125	100	98	80	275	238	135	76	80	33
3	542	210	120	99	96	78	228	220	131	89	110	33
4	289	162	121	99	94	78	270	186	197	83	148	32
5	366	148	124	106	90	139	216	165	122	81	58	53
6	282	144	119	99	91	135	179	152	119	78	52	45
7	218	142	119	101	92	104	167	143	176	67	51	37
8	192	139	113	99	91	105	159	139	144	102	48	34
9	284	141	110	98	92	135	402	132	113	101	45	33
10	2170	213	111	95	95	101	228	128	120	89	42	63
11	625	247	111	116	92	95	183	126	110	73	80	39
12	444	319	109	240	92	88	167	128	103	69	50	34
13	394	209	142	126	86	118	164	126	99	72	46	33
14	296	195	140	129	85	447	186	120	97	60	43	32
15	255	169	116	148	86	288	264	112	120	57	49	32
16	234	160	114	122	97	210	167	108	176	55	84	32
17	219	153	109	115	89	192	148	106	117	54	48	32
18	209	147	102	305	82	205	142	216	101	54	65	78
19	200	140	106	501	85	147	136	165	97	50	57	41
20	188	137	105	196	86	133	132	217	91	48	54	36
21	180	136	104	163	91	818	128	678	86	68	50	35
22	174	134	104	156	121	329	124	235	85	124	48	35
23	195	133	105	172	108	209	122	167	82	97	46	33
24	200	132	109	137	111	181	121	227	81	77	48	31
25	186	131	182	129	102	173	127	240	81	59	43	51
26	169	222	131	123	94	148	137	150	78	55	42	44
27	161	189	114	116	88	136	276	133	78	52	40	34
28	165	149	108	115	89	136	457	126	75	50	39	33
29	160	138	105	112	85	568	409	120	142	57	38	33
30	151	130	105	103	---	246	220	116	155	54	37	33
31	147	---	101	103	---	619	---	233	---	67	36	---
TOTAL	14863	4964	3611	4424	2708	6523	6416	5781	3452	2201	1739	1148
MEAN	479	165	116	143	93.4	210	214	186	115	71.0	56.1	38.3
MAX	4910	319	182	501	121	818	482	678	197	124	148	78
MIN	147	130	101	95	82	78	121	106	75	48	36	31
CFSM	4.74	1.63	1.15	1.42	.93	2.08	2.12	1.84	1.14	.70	.56	.38
IN.	5.47	1.83	1.33	1.63	1.00	2.40	2.36	2.13	1.27	.81	.64	.42

CAL YR 1979 TOTAL 93998 MEAN 258 MAX 6640 MIN 55 CFSM 2.55 IN 34.62
WTR YR 1980 TOTAL 57830 MEAN 158 MAX 4910 MIN 31 CFSM 1.56 IN 21.30

01645000 SENECA CREEK AT DAWSONVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
DEC 28...	1015	106	170	8.3	--	4.0	10	46	8	12	3.8
MAR 06...	1245	125	190	7.5	8.5	5.0	5	44	4	11	4.0
JUN 06...	1215	131	184	7.5	19.0	17.5	0	46	28	12	3.8
AUG 19...	1100	55	240	7.6	--	20.0	5	63	20	17	4.9

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
DEC 28...	10	40	.6	2.0	38	13	14	.1	9.6	98	[illegible]
MAR 06...	14	40	.9	2.0	40	13	24	.1	8.8	108	101
JUN 06...	16	42	1.0	2.0	18	7.4	22	.1	9.2	180	84
AUG 19...	17	36	.9	3.1	43	24	19	.2	9.9	144	121

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
DEC 28...	.13	28.0	5.7	.060	.18	240	150	90	80	0	80
MAR 06...	.15	36.4	2.7	.010	.03	400	290	110	80	20	60
JUN 06...	.24	63.7	3.1	.060	.18	840	730	110	80	20	60
AUG 19...	.20	21.4	3.2	.110	.34	1200	1100	110	100	50	50

01645200 WATTS BRANCH AT ROCKVILLE, MD

LOCATION.--Lat 39°05'03", long 77°10'38", Montgomery County, Hydrologic Unit 02070008, on left bank 0.2 mi (0.3 km) south of State Highway 28, 1.3 mi (2.1 km) west of post office in Rockville, and 9.4 mi (15.0 km) upstream from mouth.

DRAINAGE AREA.--3.70 mi^2 (9.58 km^2).

PERIOD OF RECORD.--June 1957 to current year.

REVISED RECORDS.--WSP 2103: 1965. WDR MD-DE-75-1: 1967-70.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 330 ft (100 m), from topographic map.

REMARKS.--Records good except those above 250 ft^3/s (7.1 m^3/s) which are poor. Some regulation of low flow from unknown source above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years, 4.24 ft^3/s (0.120 m^3/s), 15.56 in/yr (395 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,400 ft^3/s (96.3 m^3/s) Sept. 26, 1975, gage height, 7.32 ft (2.231 m), from rating curve extended above 280 ft^3/s (7.93 m^3/s) on basis of combined computation of peak flow through culvert and slope-area measurement of tributary inflow at gage height 7.22 ft (2.201 m) in gage well, 7.83 ft (2.387 m), from floodmarks; minimum, 0.10 ft^3/s (0.003 m^3/s) Sept. 2, 1966, gage height, 1.10 ft (0.335 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 220 ft^3/s (6.2 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 1	0715	*739	20.9	6.21	1.893
Mar. 13	2000	228	6.46	3.98	1.213
July 21	2015	305	8.64	4.60	1.402

Minimum discharge, 0.35 ft^3/s (0.010 m^3/s) part of each day Sept. 12-17, gage height, 1.16 ft (0.354 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	3.5	3.3	2.7	2.9	2.1	9.1	19	2.7	1.7	1.4	.61
2	17	7.5	3.2	2.7	2.9	2.3	5.1	4.6	2.7	1.6	1.3	5.0
3	19	9.1	3.1	2.7	2.7	2.5	4.5	5.4	6.5	6.0	1.2	.82
4	5.4	6.0	3.2	2.9	2.7	2.5	9.1	3.7	2.9	1.8	1.7	.59
5	16	4.0	3.3	2.9	2.7	10	4.2	3.5	2.9	11	1.2	.85
6	5.4	3.8	3.3	3.1	2.7	3.8	3.8	3.2	6.5	2.2	1.2	.55
7	4.8	3.6	3.2	2.9	2.7	3.1	3.8	3.2	6.5	1.7	1.1	.50
8	4.2	3.6	3.1	3.3	2.5	5.8	3.5	3.3	3.1	11	1.0	.44
9	18	3.8	3.1	3.1	2.7	3.5	15	3.0	2.7	7.8	.87	.48
10	87	17	3.2	2.9	3.1	3.1	4.2	3.0	2.9	3.4	1.6	3.2
11	9.1	21	3.1	14	2.7	2.9	3.8	3.2	2.3	1.9	4.1	.49
12	11	5.4	3.1	6.9	2.5	2.7	3.8	3.2	2.3	3.2	1.3	.43
13	6.9	7.4	9.6	3.3	2.5	43	3.5	2.8	2.3	1.9	.89	.40
14	5.4	4.0	3.5	6.2	2.5	22	17	2.7	2.3	1.6	.84	.41
15	5.1	3.8	3.2	4.5	2.5	5.8	8.2	2.7	14	1.5	10	.42
16	4.8	3.7	3.3	3.5	3.8	4.2	4.0	2.6	6.0	1.5	1.8	.53
17	4.8	3.6	3.1	3.1	2.5	5.1	3.5	2.5	2.6	1.5	.99	4.5
18	4.5	3.5	3.1	38	2.5	5.8	3.5	16	2.4	1.2	5.4	9.1
19	4.5	3.4	3.2	8.9	2.7	3.5	3.3	5.8	2.3	1.2	1.2	.66
20	4.2	3.4	3.1	4.3	2.7	3.5	3.3	11	2.2	1.1	1.1	.92
21	4.2	3.4	3.2	3.8	2.7	37	3.1	24	1.9	23	1.3	.66
22	4.0	3.3	3.3	7.5	7.3	5.4	3.1	3.8	1.8	11	1.1	.79
23	11	3.3	3.5	4.7	3.5	4.2	3.1	3.3	1.8	3.1	1.1	.54
24	4.8	3.2	4.0	3.4	3.3	5.1	4.8	10	1.7	1.9	.93	.54
25	4.0	3.2	12	3.5	3.3	5.1	3.1	4.8	1.8	1.6	.84	9.6
26	3.8	15	3.5	3.4	2.7	3.5	8.7	3.5	1.7	1.6	.79	.79
27	3.8	4.3	3.1	3.1	2.5	3.5	19	2.7	1.8	1.5	.69	.66
28	4.2	3.9	2.9	3.2	2.9	11	24	2.7	1.6	1.4	.62	.79
29	3.8	3.3	2.9	3.1	2.5	27	6.5	2.7	5.0	2.1	.62	.66
30	3.5	3.3	2.9	2.9	---	5.4	5.8	2.9	2.0	1.5	.54	.66
31	3.5	---	2.7	2.9	---	28	---	3.5	---	1.4	.53	---
TOTAL	380.7	167.3	114.3	163.4	85.2	272.4	197.4	168.3	99.2	114.9	49.25	46.59
MEAN	12.3	5.58	3.69	5.27	2.94	8.79	6.58	5.43	3.31	3.71	1.59	1.55
MAX	93	21	12	38	7.3	43	24	24	14	23	10	9.6
MIN	3.5	3.2	2.7	2.7	2.5	2.1	3.1	2.5	1.6	1.1	.53	.40
CFSM	3.32	1.51	1.00	1.42	.80	2.38	1.78	1.47	.90	1.00	.43	.42
IN.	3.83	1.68	1.15	1.64	.86	2.74	1.98	1.69	1.00	1.15	.50	.47

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CAL YR 1979  TOTAL  3344.40  MEAN 9.16  MAX 235  MIN 1.4   CFSM 2.48  IN 33.62
WTR YR 1980  TOTAL  1858.94  MEAN 5.08  MAX  93  MIN  .40  CFSM 1.37  IN 18.68
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01646500 POTOMAC RIVER NEAR WASHINGTON, DC

LOCATION.--Lat 38°56'58", long 77°07'40", Montgomery County, Md., Hydrologic Unit 02070008, on left bank just above Little Falls Dam, 1 mi (1.6 km) upstream from District of Columbia boundary line, 1.2 mi (1.9 km) upstream from Chain Bridge, 1.8 mi (2.9 km) east of Langley, Fairfax County, Va., and at mile 117.4 (188.9 km).

DRAINAGE AREA.--11,560 mi^2 (29,940 km^2).

PERIOD OF RECORD.--March 1930 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WDR MD-DE-75-1: 1973-74(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 37.95 ft (11.567 m) National Geodetic Vertical Datum of 1929. Prior to June 7, 1930, nonrecording gage, and June 7, 1930, to Jan. 22, 1965, water-stage recorder at site 1 mi (1.6 km) upstream on right bank at same datum.

REMARKS.--Records good. Diversions at Great Falls through aqueducts, and since June 1959, from gage pool at Little Falls Dam, for municipal supply of Washington, D. C.; since October 1958, at Rockville Filtration Plant, for municipal supply of city of Rockville; since April 1961, at Potomac Filtration Plant for water supply of Washington Suburban Sanitary District; since October 1961, at Fairfax Water Treatment Plant for water supply of city of Fairfax (from Goose Creek); and since April 1964, at Violets Lock to Chesapeake and Ohio Canal. Low flow affected slightly by Stony River Reservoir (see station 01595200) and since December 1950, by Savage River Reservoir (see station 01597500). Gage-height telemeter at station.

AVERAGE DISCHARGE.--50 years, 11,490 ft^3/s (325.4 m^3/s), 13.50 in/yr (343 mm/yr), adjusted for diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 484,000 ft^3/s (13,700 m^3/s) Mar. 19, 1936, gage height, 28.1 ft (8.56 m) site then in use; minimum daily observed at gaging station, 121 ft^3/s (3.43 m^3/s) Sept. 9, 1966, does not include diversion of 489 ft^3/s (13.8 m^3/s) for municipal use; minimum daily (adjusted), 601 ft^3/s (17.0 m^3/s) Sept. 10, 1966, includes diversion of 449 ft^3/s (12.7 m^3/s) for municipal use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1889, was of approximately the same magnitude as that of March 19, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 45,000 ft^3/s (1,200 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Oct. 1	2330	52200	1480	6.81	2.076	Mar. 23	0030	64800	1840	7.42	2.262
Oct. 5	0030	61800	1750	7.28	2.219	Apr. 2	1000	59900	1700	7.19	2.192
Oct. 7	1000	71500	2020	7.72	2.353	Apr. 11	1430	57400	1630	7.07	2.155
Oct. 12	0430	*81700	2310	8.15	2.484	Apr. 17	0430	54200	1530	6.91	2.106
Nov. 4	2015	52400	1480	6.82	2.079	May 2	1615	77100	2180	7.96	2.426
Jan. 16	2315	45600	1290	6.47	1.972	May 23	0515	64800	1840	7.42	2.262

Minimum daily discharge, 1,250 ft^3/s (35.4 m^3/s) Sept. 17, does not include diversion for municipal use; minimum daily (adjusted), 1,890 ft^3/s (53.5 m^3/s) Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30600	10000	22000	14700	10500	9580	44200	34500	12000	3940	3400	2050
2	42500	9680	18500	13400	9000	8500	58300	68100	11500	3990	4180	1980
3	33900	10800	16100	12500	8200	7780	50000	58400	12500	4080	3730	1900
4	48700	36700	14300	11600	8000	7220	39500	41700	11900	3660	3460	1840
5	55800	45000	13100	11100	8000	7030	33300	31800	11000	3520	2990	1900
6	54300	32500	12100	10500	8200	8290	28700	25900	9960	3470	2750	1990
7	67100	25100	11700	9680	7990	8820	25400	21900	10000	3210	2750	1790
8	50300	21200	11100	9260	8100	11400	22000	19100	9390	3460	2580	1840
9	37900	18700	10500	9100	8060	16200	22200	17100	9260	4440	2440	1840
10	49200	17500	9850	8750	7890	14600	28800	15500	8820	4550	2330	2090
11	69700	16300	9340	8500	7510	14900	52000	14200	8500	10100	2430	1990
12	78000	17000	8830	9680	7300	14600	45500	13300	8320	8870	2420	1840
13	63600	15600	8610	9780	6850	14300	34900	12600	7890	6920	2450	1790
14	51400	15300	9000	10600	6570	15300	28700	12600	8200	5690	2670	1600
15	42000	15100	9600	16000	6300	14800	28900	13100	7530	4880	3110	1340
16	34500	15000	10800	30700	6220	14300	43100	11900	7040	4260	3460	1290
17	28300	14400	11000	42100	6290	15700	50800	10700	7120	4240	3040	1250
18	24200	13600	10600	33200	6010	24300	38600	10700	6890	3770	2910	1540
19	21200	12900	9770	35900	5910	41800	30700	11100	9880	3210	2670	1370
20	18500	12300	9200	37100	5770	46200	26100	11900	9140	2870	2750	1280
21	16500	11600	9000	38300	5820	42300	22400	19800	7370	2690	4670	1380
22	15000	11000	8740	31800	6190	58700	19800	46000	6470	2950	8240	1370
23	13900	10500	8250	26300	6560	56600	17900	60600	5830	3680	6760	1380
24	13900	9990	8020	22200	7060	42500	15900	42200	5340	4340	5360	1470
25	14000	9700	8420	19600	10400	33700	14600	34400	4950	4230	4430	1700
26	13800	9920	13300	17500	13600	29400	13800	30500	4610	4150	3790	1710
27	12800	12900	30700	15900	13000	25300	14600	27700	4310	3800	3350	1530
28	11700	33900	28200	14800	11500	22100	17400	21800	3980	4020	2980	1620
29	11200	35900	22300	13800	10500	24700	27100	17500	3710	3590	2650	1650
30	10900	27400	18700	12800	---	31700	33500	14600	3890	3050	2450	1550
31	10600	---	16400	12200	---	40700	---	13200	---	2920	2170	---
TOTAL	1046000	547490	408030	569350	233300	723320	928700	784400	237300	132550	105370	49870
MEAN	33740	18250	13160	18370	8045	23330	30960	25300	7910	4276	3399	1662
MAX	78000	45000	30700	42100	13600	58700	58300	68100	12500	10100	8240	2090
MIN	10600	9680	8020	8500	5770	7030	13800	10700	3710	2690	2170	1250
(≠)	474	465	456	442	451	458	486	490	546	622	653	663
MEAN♦	34210	18720	13620	18810	8496	23790	31450	25790	8456	4898	4052	2325
CFSM♦	2.96	1.62	1.18	1.63	.73	2.06	2.72	2.23	.73	.42	.35	.20
IN♦	3.41	1.81	1.36	1.88	.79	2.38	3.04	2.57	.81	.48	.40	.22

CAL YR 1979 TOTAL 7446080 MEAN 20400 MAX 201000 MIN 3120 MEAN♦ 20880 CFSM♦ 1.81 IN♦ 24.57
WTR YR 1980 TOTAL 5765680 MEAN 15750 MAX 78000 MIN 1250 MEAN♦ 16280 CFSM♦ 1.41 IN♦ 19.19

≠ Diversion in cfs, for municipal supply of Washington, D.C., Washington Suburban Sanitary District, city of Rockville, city of Fairfax (from Goose Creek), and the Chesapeake and Ohio Canal (insignificant diversion to canal during current water year); records furnished by Corps of Engineers, Washington Suburban Sanitary Commission, city of Rockville, and city of Fairfax.

♦ Adjusted for diversion.

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC
(National stream-quality accounting network station)

LOCATION.--Lat 38°55'46", long 77°07'02", Arlington County, Va., Hydrologic Unit 02070010, under right downstream side of bridge on Virginia State Highway 123, and at river mile 115.9 (186.5 km).

DRAINAGE AREA.--11,570 mi² (29,970 km²).

PERIOD OF RECORD.--March 1973 to current year. Prior to October 1977, published as "at Great Falls."

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1978 to current year.
pH: June 1978 to current year.
WATER TEMPERATURES: June 1978 to current year.
DISSOLVED OXYGEN: June 1978 to current year.
SUSPENDED SEDIMENT: October 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1978.

REMARKS.--Records of discharge are given for station 01646500 Potomac River near Washington, D.C. (unadjusted for diversions). Interruptions in record were due to malfunctions of the recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 584 micromhos Nov. 27, 1979; minimum, 116 micromhos Jan. 25, 1979.
pH: Maximum, 9.1 units on several days in 1978 and 1979; minimum, 7.4 units June 4, Aug. 27, and Sept. 7, 1979.
WATER TEMPERATURES: Maximum, 31.0°C July 23, 24, 1978; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 16.4 mg/L on many days in 1979; minimum, 6.6 mg/L Aug. 3, 1979.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 812 mg/L Sept. 6, 1978; minimum daily mean, 1 mg/L on many days during winter periods.
SEDIMENT LOADS: Maximum daily, 281,000 tons (253,000 tonnes) Feb. 27, 1979; minimum daily, 6.9 tons (6.3 tonnes) Sept. 20, 1980.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 588 mg/L Mar. 22; minimum daily mean, 1 mg/L on many days during winter period.
SEDIMENT LOADS: Maximum daily, 92,100 tons (83,600 tonnes) Mar. 22; minimum daily, 6.9 tons (6.3 tonnes) Sept. 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
OCT												
11...	1130	68800	172	8.1	13.5	11.4	--	8.3	--	--	--	--
17...	1100	28400	215	7.4	17.0	11.9	3.0	11.4	270	120	93	25
NOV												
27...	1100	11900	280	8.2	11.0	14.0	1.0	11.8	280	270	110	23
DEC												
12...	1030	8840	280	8.1	2.4	7.1	1.0	13.3	K7	K4	120	33
JAN												
14...	1030	10200	285	8.1	2.5	2.3	.51	12.6	33	280	120	34
FEB												
11...	1030	7310	310	8.0	5.0	2.0	.50	14.1	<1	K2	130	33
MAR												
11...	1100	14900	255	8.5	8.0	8.0	.20	11.9	<1	K3	110	35
18...	1230	23600	225	8.0	--	9.0	--	12.2	--	--	89	31
18...	1600	26200	217	8.1	--	9.0	--	12.8	--	--	86	30
18...	1900	28900	210	8.3	--	9.0	--	--	--	--	86	28
19...	1000	41200	220	7.9	13.0	9.0	--	13.0	--	--	89	33
19...	1315	43000	222	7.8	13.0	9.0	--	--	--	--	89	32
22...	1045	57200	148	7.8	6.0	7.0	--	11.4	--	--	51	19
22...	1330	57600	150	7.8	9.0	8.0	--	11.5	--	--	59	25
22...	1630	59300	150	7.8	5.0	8.0	--	11.4	--	--	59	24
23...	1230	55600	168	7.3	14.0	8.0	--	12.8	--	--	65	26
23...	1450	54200	138	--	--	8.0	--	--	--	--	68	23
24...	1230	42100	--	--	10.0	8.0	50	11.8	--	--	65	27
APR												
01...	1430	43200	202	7.2	16.0	10.0	3.0	11.0	--	--	72	29
02...	1100	59700	200	8.2	14.0	9.0	22	12.0	--	--	75	31
02...	1300	59900	195	8.2	19.0	9.0	25	11.9	--	--	75	31
03...	0930	51200	177	7.8	16.0	10.0	1.2	11.0	--	--	66	28
16...	1030	41400	185	8.0	12.0	12.0	2.8	11.6	1000	2400	80	29
MAY												
02...	1130	73800	207	8.0	23.0	13.5	40	11.4	--	--	88	31
02...	1530	76600	186	7.9	24.0	13.5	--	--	--	--	--	--
02...	1800	76400	182	7.9	24.0	13.5	--	11.4	--	--	--	--
03...	1230	57200	163	7.8	26.0	14.5	120	11.0	--	--	64	25
13...	1045	12400	240	7.7	24.0	18.9	4.1	9.6	77	220	110	34

K Results based on colony count outside the acceptable range (non-ideal colony count).

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
JUN												
05...	1210	10800	--	--	--	--	--	--	--	--	--	--
17...	1100	7310	268	8.3	--	23.0	.50	9.0	64	54	110	43
23...	1900	5780	295	8.7	--	26.5	--	8.8	--	--	110	36
24...	0630	5470	295	8.4	--	--	--	7.1	--	--	120	35
24...	1900	5160	300	8.8	--	27.5	--	8.6	--	--	120	42
25...	0630	5090	285	8.1	--	24.0	--	7.3	--	--	110	40
25...	1900	4790	275	9.0	--	26.0	--	10.4	--	--	110	40
26...	0630	4650	262	8.1	--	25.0	--	7.5	--	--	110	39
JUL												
09...	1100	4160	310	8.0	26.0	25.0	--	8.1	--	--	110	29
15...	1100	4860	360	8.4	29.0	28.0	2.4	7.7	K12	1400	130	48
21...	1400	2610	--	--	--	--	--	--	--	--	--	--
AUG												
05...	1440	2990	--	--	--	--	--	--	--	--	--	--
08...	1325	2550	--	--	--	--	--	--	--	--	--	--
09...	1515	2400	--	--	--	--	--	--	--	--	--	--
11...	1120	2450	--	--	--	--	--	--	--	--	--	--
13...	1400	2400	320	8.0	29.5	28.0	3.5	7.5	K12	140	120	51
15...	1334	2880	--	--	--	--	--	--	--	--	--	--
18...	1025	2930	--	--	--	--	--	--	--	--	--	--
28...	1000	2990	--	--	--	--	--	--	--	--	--	--
SEP												
05...	2040	2040	--	--	--	--	--	--	--	--	--	--
11...	1315	1940	--	--	--	--	--	--	--	--	--	--
16...	1340	1290	--	--	--	--	--	--	--	--	--	--
17...	1030	1290	360	8.2	28.0	25.0	.30	9.1	K10	510	150	58
18...	1550	1600	--	--	--	--	--	--	--	--	--	--
30...	1330	1510	--	--	--	--	--	--	--	--	--	--

K Results based on colony count outside the acceptable range (non-ideal colony count).

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT												
11...	--	--	--	--	--	--	--	--	--	--	--	--
17...	28	5.5	4.5	12	.2	1.7	68	21	5.4	.1	8.4	126
NOV												
27...	32	6.9	8.4	18	.4	1.7	85	30	9.3	.1	2.0	163
DEC												
12...	35	7.4	7.8	16	.3	1.6	85	29	9.1	.7	3.2	157
JAN												
14...	36	7.5	9.6	19	.4	1.7	87	32	11	.1	4.3	153
FEB												
11...	48	8.1	11	15	.4	1.5	100	31	12	.2	5.1	206
MAR												
11...	31	7.4	8.9	15	.4	1.2	73	34	10	.1	1.8	152
18...	26	5.8	9.9	19	.5	1.6	58	27	14	.1	3.7	--
18...	25	5.8	9.6	19	.5	1.7	56	27	13	.1	3.8	--
18...	25	5.7	9.3	19	.4	1.6	58	26	19	.1	3.7	--
19...	26	5.8	8.0	16	.4	1.9	56	26	11	.1	4.7	--
19...	26	5.8	8.1	16	.4	1.9	57	26	11	.1	4.8	--
22...	15	3.4	4.4	15	.3	2.4	32	17	8.1	.1	5.5	--
22...	17	4.0	4.4	13	.3	2.3	34	17	7.6	.1	6.0	--
22...	17	4.1	4.3	13	.2	2.3	35	17	7.3	.1	6.0	--
23...	19	4.3	4.9	14	.3	1.8	39	20	7.1	.1	6.4	--
23...	20	4.3	5.0	13	.3	1.8	45	20	7.1	.1	6.7	--
24...	19	4.3	5.0	14	.3	1.6	38	19	6.2	.1	6.9	111
APR												
01...	21	4.8	6.4	16	.3	1.8	43	24	8.3	.1	6.9	122
02...	22	4.9	5.4	13	.3	1.7	44	24	7.0	.1	6.7	123
02...	22	4.8	5.5	13	.3	1.8	44	23	6.7	.1	6.7	165
03...	19	4.4	5.2	14	.3	1.7	38	22	6.3	.1	6.7	112
16...	24	4.8	4.9	12	.2	1.5	51	19	6.0	.1	6.8	134
MAY												
02...	26	5.5	5.5	12	.3	1.7	57	24	6.3	.1	7.2	131
02...	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--
03...	19	4.0	3.7	11	.2	1.7	39	19	4.4	.1	6.7	100
13...	31	6.8	7.4	13	.3	1.5	71	29	7.7	.1	5.2	137
JUN												
05...	--	--	--	--	--	--	--	--	--	--	3.1	--
17...	31	7.7	9.9	16	.4	1.7	66	41	11	.1	1.7	158
23...	32	7.8	11	17	.5	2.0	76	45	12	.1	1.7	--
24...	33	8.1	12	18	.5	2.0	81	48	13	.1	1.7	--
24...	33	8.1	12	18	.5	2.0	74	51	13	.1	1.9	--
25...	32	7.9	11	17	.5	2.1	72	48	11	.1	1.8	--
25...	32	7.8	10	16	.4	2.0	72	42	10	.1	2.2	--
26...	32	7.8	10	16	.4	2.0	73	39	10	.1	2.1	--
JUL												
09...	28	8.9	14	22	.6	2.5	78	41	13	.1	3.5	--
15...	38	8.7	15	20	.6	2.5	83	63	16	.1	3.9	243
21...	--	--	--	--	--	--	--	--	--	--	5.3	--
AUG												
05...	--	--	--	--	--	--	--	--	--	--	5.8	--
08...	--	--	--	--	--	--	--	--	--	--	6.2	--
09...	--	--	--	--	--	--	--	--	--	--	2.6	--
11...	--	--	--	--	--	--	--	--	--	--	6.1	--
13...	28	11	17	24	.7	2.9	64	54	18	.2	6.6	195
15...	--	--	--	--	--	--	--	--	--	--	5.9	--
18...	--	--	--	--	--	--	--	--	--	--	5.3	--
28...	--	--	--	--	--	--	--	--	--	--	5.9	--
SEP												
05...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	5.0	--
16...	--	--	--	--	--	--	--	--	--	--	5.0	--
17...	39	12	19	22	.7	2.9	89	59	20	.2	5.1	220
18...	--	--	--	--	--	--	--	--	--	--	5.1	--
30...	--	--	--	--	--	--	--	--	--	--	5.8	--

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
OCT												
11...	--	--	--	226	1.2	1.3	5.7	.03	.01	.03	1.2	1.3
17...	121	.17	9660	--	1.3	1.3	5.7	.00	.01	.03	1.3	1.3
NOV												
27...	147	.22	5240	--	1.1	1.1	4.9	.00	.00	.00	1.1	1.1
DEC												
12...	152	.21	3750	--	1.4	1.4	6.2	.00	.01	.03	1.4	1.4
JAN												
14...	161	.21	4210	--	1.5	1.5	6.6	.01	.01	.03	1.5	1.5
FEB												
11...	178	.28	4070	--	1.8	1.9	8.4	.01	.01	.03	1.8	1.9
MAR												
11...	142	.21	6120	--	.86	.87	3.9	.00	.01	.03	.86	.88
18...	129	.18	8220	135	1.2	1.3	5.7	.02	.02	.07	1.2	1.3
18...	126	.17	8910	134	1.2	1.3	5.7	.02	.02	.07	1.2	1.3
18...	131	.18	10200	137	1.3	1.3	5.6	.02	.03	.10	1.3	1.3
19...	124	.17	13800	147	1.6	1.5	6.6	.04	.02	.07	1.6	1.5
19...	124	.17	14400	179	1.6	1.4	6.2	.05	.01	.03	1.6	1.4
22...	82	.11	12700	124	1.4	1.5	6.5	.06	.03	.10	1.5	1.5
22...	86	.12	13400	173	1.5	1.5	6.4	.06	.05	.16	1.6	1.5
22...	86	.12	13800	117	1.2	1.5	6.5	.06	.04	.13	1.3	1.5
23...	94	.13	14100	116	1.3	1.5	6.6	.33	.02	.07	1.6	1.5
23...	99	.13	14500	115	1.3	1.5	6.6	.03	.02	.07	1.3	1.5
24...	91	.15	12600	--	1.5	1.4	6.2	.02	.01	.03	1.5	1.4
APR												
01...	106	.17	14200	--	1.4	1.4	6.2	.02	.01	.03	1.4	1.4
02...	105	.17	19800	--	1.4	1.4	6.2	.02	.01	.03	1.4	1.4
02...	103	.22	26700	--	1.4	1.4	6.2	.02	.01	.03	1.4	1.4
03...	94	.15	15500	--	1.4	1.3	5.7	.02	.02	.07	1.4	1.3
16...	105	.18	15000	--	1.4	1.5	6.6	.03	.02	.07	1.4	1.5
MAY												
02...	116	.18	26100	--	1.2	1.1	4.8	.03	.01	.03	1.2	1.1
02...	--	--	--	--	.98	.97	4.3	.02	.01	.03	1.0	.98
02...	--	--	--	--	--	--	--	--	--	--	--	--
03...	86	.14	15400	--	.92	.88	3.9	.02	.01	.03	.94	.90
13...	136	.19	4590	--	1.1	1.1	4.8	.02	.01	.03	1.1	1.1
JUN												
05...	--	--	--	--	--	.92	<4.1	--	.01	.03	--	.93
17...	148	.21	3120	--	.84	.84	3.7	.01	.01	.03	.85	.85
23...	161	.22	2510	207	.74	.78	3.5	.01	.01	.03	.75	.79
24...	170	.23	2510	220	.79	.82	3.6	.01	.01	.03	.80	.83
24...	170	.23	2370	221	.80	.88	3.9	.01	.01	.03	.81	.88
25...	161	.22	2210	206	.82	.61	2.7	.01	.01	.03	.83	.85
25...	154	.21	1990	187	.84	.61	2.7	.01	.01	.03	.85	.85
26...	151	.21	1900	187	.82	.84	3.7	.02	.01	.03	.84	.84
JUL												
09...	160	.22	1800	210	.47	.48	2.1	.02	.02	.07	.49	.50
15...	200	.33	3190	--	.63	.62	2.7	.01	.01	.03	.64	.63
21...	--	--	--	--	--	.45	2.0	--	.01	.03	--	.46

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
AUG											
05...	--	--	--	--	.40	1.8	--	.01	.03	--	.41
08...	--	--	--	--	.28	1.2	--	.02	.07	--	.30
09...	--	--	--	--	.04	.18	--	.01	.03	--	.05
11...	--	--	--	--	.23	1.0	--	.02	.07	--	.25
13...	178	.27	1260	.25	.27	1.2	.01	.01	.03	.26	.28
15...	--	--	--	--	.29	1.3	--	.02	.07	--	.32
18...	--	--	--	--	.59	2.6	--	.02	.07	--	.60
28...	--	--	--	--	.84	3.7	--	.02	.07	--	.86
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	.56	2.5	--	.01	.03	--	.57
16...	--	--	--	--	.41	1.8	--	.01	.03	--	.42
17...	213	.30	766	.46	.46	2.0	.00	.01	.03	.46	.47
18...	--	--	--	--	.54	2.4	--	.01	.03	--	.56
30...	--	--	--	--	.66	2.9	--	.01	.03	--	.67

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)
OCT											
11...	.06	.02	.07	.03	1.1	--	1.2	.00	--	2.4	2.0
17...	.00	.01	.00	.01	.22	--	.22	--	--	1.5	--
NOV											
27...	.01	.00	.01	.00	.43	--	.44	--	--	1.5	--
DEC											
12...	.01	.00	.01	.00	.11	.10	.12	.02	.10	1.5	1.5
JAN											
14...	.12	.00	.15	.00	.17	.26	.29	.03	.26	1.8	1.8
FEB											
11...	.01	.01	.01	.01	.28	.34	.29	.00	.35	2.1	2.3
MAR											
11...	.09	.01	.11	.01	.26	.32	.35	.02	.33	1.2	1.2
18...	.07	.06	.08	.08	.36	--	.43	--	--	1.6	--
18...	.03	.02	.04	.03	.47	.37	.50	.11	.39	1.7	1.7
18...	.09	.05	.11	.06	.64	.13	.73	.55	.18	2.0	1.5
19...	.04	.05	.05	.06	.93	.23	.97	.69	.28	2.6	1.8
19...	.03	.02	.04	.03	.27	.22	.30	.06	.24	1.9	1.6
22...	.20	.18	.24	.23	2.4	.77	2.6	1.7	.95	4.1	2.5
22...	.13	.02	.16	.03	1.1	1.1	1.2	.10	1.1	2.8	2.6
22...	.10	.10	.12	.13	1.9	.65	2.0	1.3	.75	3.3	2.3
23...	.06	.08	.07	.10	.53	.36	.59	.15	.44	2.2	1.9
23...	.06	.09	.07	.12	.77	.31	.83	.43	.40	2.1	1.9
24...	.07	.03	.08	.04	.39	.57	.46	.00	.60	2.0	2.0
APR											
01...	.05	.04	.06	.05	.42	.15	.47	.28	.19	1.9	1.6
02...	.04	.04	.05	.05	.13	.23	.17	.00	.27	1.6	1.7
02...	.04	.03	.05	.04	.24	.21	.28	.04	.24	1.7	1.6
03...	.04	.00	.05	.00	.78	.63	.82	.19	.63	2.2	1.9
16...	.03	.05	.04	.06	.33	.29	.36	.02	.34	1.8	1.8
MAY											
02...	.04	.00	.05	.00	.78	.30	.82	.52	.30	2.0	1.4
02...	.03	.01	.04	.01	1.2	.19	1.2	1.0	.20	2.2	1.2
02...	--	--	--	--	--	--	--	--	--	--	--
03...	.04	.01	.05	.01	1.3	.62	1.3	.67	.63	2.2	1.5
13...	.05	.00	.06	.00	.36	.14	.41	.27	.14	1.5	1.2
JUN											
05...	--	.03	--	.04	--	.72	.35	.00	.75	--	1.7
17...	.06	.03	.07	.04	.33	.11	.39	.25	.14	1.2	.99
23...	.05	.01	.06	.01	.33	.21	.38	.16	.22	1.1	1.0
24...	.07	.02	.08	.03	.25	.12	.32	.18	.14	1.1	.97
24...	.06	.04	.07	.05	.16	.17	.22	.01	.21	1.8	1.1
25...	.06	.02	.07	.03	.15	.15	.21	.04	.17	1.8	1.0
25...	.08	.05	.10	.06	.35	.22	.43	.16	.27	1.3	1.1
26...	.05	.06	.06	.08	.40	.20	.45	.19	.26	1.3	1.1
JUL											
09...	.13	.13	.16	.17	.70	.51	.83	.19	.64	1.3	1.1
15...	.03	.01	.04	.01	.63	.22	.66	.43	.23	1.3	.86
21...	--	.02	--	.03	--	.33	.37	.02	.35	--	.81
AUG											
05...	--	.01	--	.01	--	.14	.39	.24	.15	--	.56
08...	--	.02	--	.03	--	.23	.17	.00	.25	--	.55
09...	--	.08	--	.10	--	.19	.18	.00	.27	--	.32
11...	--	.08	--	.10	--	.37	.45	.00	.45	--	.70
13...	.04	.07	.05	.09	.36	.23	.40	.10	.30	.66	.58
15...	--	.08	--	.10	--	.22	.38	.08	.30	--	.62
18...	--	.06	--	.08	--	.09	.26	.11	.15	--	.75
28...	--	.02	--	.03	--	.13	.26	.11	.15	--	1.0
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
11...	--	.07	--	.09	--	.17	.54	.30	.24	--	.81
16...	--	.04	--	.05	--	.07	.27	.16	.11	--	.53
17...	.03	.06	.04	.08	.22	.25	.25	.00	.31	.71	.78
18...	--	.04	--	.05	--	.12	.66	.50	.16	--	.72
30...	--	.05	--	.06	--	.21	.42	.16	.26	--	.93

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
OCT											
11...	11	.220	.21	.67	.100	.07	.04	.12	1600	1300	300
17...	6.7	.060	.00	.18	.030	.00	--	--	900	800	100
NOV											
27...	6.8	.020	.00	.06	.010	.00	.00	.00	400	200	200
DEC											
12...	6.7	.020	.15	.06	.020	.05	.00	.00	300	0	300
JAN											
14...	7.9	.040	.06	.12	.030	.02	.03	.09	200	100	100
FEB											
11...	9.3	.040	.06	.12	.030	.02	.01	.03	--	--	200
MAR											
11...	5.4	.020	.00	.06	.020	.00	.01	.03	200	100	100
18...	7.2	.080	.03	.25	.050	.01	.01	.03	500	400	100
18...	7.5	.100	.00	.31	.030	.00	.00	.00	700	600	100
18...	9.0	.140	.03	.43	.030	.01	.01	.03	600	500	100
19...	11	.240	.06	.74	.050	.02	.03	.09	1700	1500	200
19...	8.4	.200	.06	.61	.050	.02	.02	.06	1500	1300	200
22...	18	1.000	.49	3.1	.070	.16	.03	.09	15000	15000	100
22...	12	.380	.37	1.2	.060	.12	.03	.09	11000	11000	60
22...	15	.570	.34	1.7	.080	.11	.08	.25	8000	7900	60
23...	9.7	.230	.12	.71	.050	.04	.05	.15	2400	2100	300
23...	9.4	.220	.09	.67	.040	.03	.06	.18	2000	1600	400
24...	8.7	.170	.25	.52	.040	.08	.00	.00	1700	1600	100
APR											
01...	8.3	.100	.06	.31	.030	.02	.02	.06	1300	1100	200
02...	7.0	.160	.06	.49	.030	.02	.03	.09	2200	2100	100
02...	7.4	.170	.03	.52	.030	.01	.02	.06	2200	2100	100
03...	9.8	.160	.03	.49	.020	.01	.00	.00	2900	2800	100
16...	7.8	.110	.06	.34	.040	.02	.02	.06	800	700	100
MAY											
02...	8.9	.070	.06	.21	.040	.02	.00	.00	1600	1500	100
02...	9.7	.050	.06	.15	.040	.02	.00	.00	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--
03...	9.9	.060	.09	.18	.020	.03	.00	.00	3900	3800	100
13...	6.7	.000	.03	.00	.020	.01	.00	.00	200	0	200
JUN											
05...	--	.165	--	--	.055	--	--	--	--	--	--
17...	5.5	.050	.00	.15	.010	.00	.00	.00	500	400	100
23...	5.0	.050	.00	.15	.010	.00	.00	.00	400	300	100
24...	5.0	.040	.00	.12	.010	.00	.00	.00	300	200	100
24...	4.6	.040	.00	.12	.010	.00	.00	.00	300	200	100
25...	4.6	.040	.00	.12	.010	.00	.00	.00	200	100	100
25...	5.7	.050	.03	.15	.010	.01	.00	.00	300	200	100
26...	5.7	.040	.00	.12	.010	.00	.00	.00	400	300	100
JUL											
09...	5.8	.080	.06	.25	.010	.02	.01	.03	900	600	300
15...	5.8	.060	.00	.18	.010	.00	.01	.03	600	600	0
21...	--	.044	--	--	.015	--	--	--	--	--	--
AUG											
05...	--	.043	--	--	.020	--	--	--	--	--	--
08...	--	.101	--	--	.068	--	--	--	--	--	--
09...	--	.052	--	--	.030	--	--	--	--	--	--
11...	--	.088	--	--	.043	--	--	--	--	--	--
13...	2.9	.100	.06	.31	.040	.02	.02	.06	300	200	100
15...	--	.060	--	--	.017	--	--	--	--	--	--
18...	--	.067	--	--	.028	--	--	--	--	--	--
28...	--	.081	--	--	.052	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
11...	--	.051	--	--	.051	--	--	--	--	--	--
16...	--	.030	--	--	.017	--	--	--	--	--	--
17...	3.1	.040	.09	.12	.000	.03	.02	.06	200	100	100
18...	--	.036	--	--	.042	--	--	--	--	--	--
30...	--	.085	--	--	.039	--	--	--	--	--	--

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)
OCT									
17...	--	--	--	--	--	--	0	--	--
NOV									
27...	--	--	--	--	--	--	0	--	--
DEC									
12...	1	1	0	0	0	40	0	0	2
JAN									
14...	--	--	--	--	--	--	0	--	--
MAR									
11...	1	0	1	0	0	--	0	0	12
24...	--	--	--	--	--	--	0	--	--
APR									
01...	--	--	--	--	--	--	0	--	--
02...	--	--	--	--	--	--	0	--	--
02...	--	--	--	--	--	--	0	--	--
03...	--	--	--	--	--	--	0	--	--
16...	--	--	--	--	--	--	0	--	--
MAY									
02...	--	--	--	--	--	--	0	--	--
03...	--	--	--	--	--	--	0	--	--
13...	--	--	--	--	--	--	0	--	--
JUN									
17...	0	0	0	50	0	50	0	0	0
JUL									
15...	--	--	--	--	--	--	0	--	--
AUG									
13...	--	--	--	--	--	--	1	--	--
SEP									
17...	1	0	1	100	100	0	0	0	0

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)
OCT								
17...	0	--	--	--	--	3	--	--
NOV								
27...	8	--	--	--	--	3	--	--
DEC								
12...	20	10	0	0	0	1	0	1
JAN								
14...	11	--	--	--	--	3	--	--
MAR								
11...	10	10	0	0	1	1	0	2
24...	1	--	--	--	--	5	--	--
APR								
01...	5	--	--	--	--	3	--	--
02...	7	--	--	--	--	5	--	--
02...	5	--	--	--	--	6	--	--
03...	4	--	--	--	--	7	--	--
16...	4	--	--	--	--	4	--	--
MAY								
02...	9	--	--	--	--	6	--	--
03...	14	--	--	--	--	11	--	--
13...	7	--	--	--	--	4	--	--
JUN								
17...	10	10	0	0	0	1	1	0
JUL								
15...	8	--	--	--	--	1	--	--
AUG								
13...	14	--	--	--	--	3	--	--
SEP								
17...	20	10	0	0	0	3	1	2

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT									
11...	3900	3800	70	--	--	--	170	160	10
17...	1000	1000	40	9	--	--	60	60	5
NOV									
27...	--	--	30	35	--	--	20	20	4
DEC									
12...	130	100	30	9	9	0	10	1	9
JAN									
14...	200	160	40	10	--	--	20	10	10
FEB									
11...	--	--	20	--	--	--	--	--	10
MAR									
11...	230	200	30	0	0	0	40	20	20
18...	820	790	30	82	22	60	70	50	20
18...	1000	960	40	11	0	16	80	50	30
18...	1100	1100	30	5	0	7	100	80	20
19...	2800	2800	50	9	9	0	230	210	20
19...	2500	2500	50	8	8	0	200	180	20
22...	30000	30000	60	24	24	0	970	970	5
22...	22000	22000	40	0	0	0	780	770	10
22...	14000	14000	100	0	0	0	600	590	10
23...	3600	3600	30	11	3	8	230	220	7
23...	2900	2800	100	69	68	1	200	190	8
24...	2700	2700	40	7	--	--	160	160	5
APR									
01...	100	20	80	6	--	--	120	110	10
02...	70	10	60	12	--	--	200	190	7
02...	80	20	60	9	--	--	220	210	9
03...	80	10	70	15	--	--	290	290	5
16...	1500	1500	40	4	--	--	120	120	5
MAY									
02...	3700	3700	50	13	--	--	420	410	6
03...	9600	9500	90	12	--	--	20	20	1
13...	480	460	20	13	--	--	20	20	2
JUN									
17...	500	490	10	9	9	0	50	50	5
23...	540	530	10	--	--	--	50	50	5
24...	440	430	10	--	--	--	10	0	10
24...	430	420	10	--	--	--	50	50	3
25...	360	360	0	--	--	--	40	40	1
25...	500	490	10	--	--	--	50	50	4
26...	440	430	10	--	--	--	40	30	6
JUL									
09...	1200	1200	20	--	--	--	110	100	10
15...	450	440	10	3	--	--	70	60	8
AUG									
13...	370	360	10	10	--	--	60	40	20
SEP									
17...	380	290	90	2	1	1	50	40	10

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)
OCT							
17...	.1	--	3	--	--	--	--
NOV							
27...	.1	--	3	--	--	--	--
DEC							
12...	.1	.1	2	2	0	0	0
JAN							
14...	.1	--	2	--	--	--	--
FEB							
11...	.1	--	--	--	--	--	--
MAR							
11...	.1	.1	1	1	0	0	0
24...	.1	--	6	--	--	--	--
APR							
01...	.1	--	5	--	--	--	--
02...	.1	--	6	--	--	--	--
02...	.1	--	6	--	--	--	--
03...	.1	--	10	--	--	--	--
16...	.1	--	3	--	--	--	--
MAY							
02...	.1	--	7	--	--	--	--
03...	.1	--	18	--	--	--	--
13...	.1	--	1	--	--	--	--
JUN							
17...	.1	.1	2	2	0	0	0
JUL							
15...	.1	--	0	--	--	--	--
AUG							
13...	.1	--	8	--	--	--	--
SEP							
17...	.1	.1	20	16	4	0	0

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT							
17...	--	--	--	--	10	--	--
NOV							
27...	--	0	--	--	10	--	--
DEC							
12...	0	0	0	0	10	0	10
JAN							
14...	--	--	--	--	20	--	--
FEB							
11...	--	--	--	--	--	--	--
MAR							
11...	0	0	0	0	10	10	0
24...	--	0	--	--	20	--	--
APR							
01...	--	0	--	--	20	--	--
02...	--	0	--	--	30	--	--
02...	--	0	--	--	30	--	--
03...	--	0	--	--	50	--	--
16...	--	--	--	--	20	--	--
MAY							
02...	--	0	--	--	40	--	--
03...	--	0	--	--	70	--	--
13...	--	0	--	--	40	--	--
JUN							
17...	0	0	0	0	10	10	0
JUL							
15...	--	--	--	--	10	--	--
AUG							
13...	--	0	--	--	20	--	--
SEP							
17...	0	0	0	0	10	10	0

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
OCT										
17...	1.5	.4	2.0	1.0	.3	.5	2.1	.5	.04	.19
MAR										
24...	1.5	4.4	2.1	1.0	3.0	3.3	2.0	3.2	.05	.04

DATE	CARBON, TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, INOR- GANIC, TOTAL (MG/L AS C)	CARBON, INOR- GANIC, DIS- SOLVED (MG/L AS C)
OCT					
17...	19	1.6	--	17	6.9
NOV					
27...	25	2.3	2.2	23	22
DEC					
12...	--	--	3.8	20	21
JAN					
14...	24	3.4	2.6	21	21
MAR					
11...	--	--	2.1	20	22
18...	19	3.1	3.4	16	15
18...	22	4.6	2.3	17	15
18...	19	3.8	--	15	15
19...	21	6.6	9.2	14	13
19...	19	4.9	--	14	14
22...	35	25	4.2	9.6	8.6
22...	--	12	4.1	--	--
22...	26	14	3.8	12	9.3
23...	24	5.8	4.8	18	8.9
23...	27	5.7	--	21	--
23...	--	--	2.4	--	--
24...	22	7.8	2.4	14	--
APR					
01...	4.0	4.0	2.5	.0	--
02...	20	5.4	2.3	15	12
APR					
02...	20	4.8	2.3	15	12
03...	19	5.9	4.6	13	11
16...	22	3.7	1.7	18	16
MAY					
02...	25	4.6	2.5	20	16
03...	27	12	5.2	15	12
13...	22	2.4	2.1	20	20
JUN					
17...	--	--	3.4	21	17
23...	27	5.2	5.4	22	21
24...	27	3.5	3.0	23	22
24...	24	3.7	3.5	20	31
25...	25	3.6	--	21	--
25...	20	2.0	--	18	14
26...	25	5.1	4.8	20	20
JUL					
09...	29	4.0	3.8	25	23
15...	31	7.2	3.0	24	22
AUG					
13...	21	3.1	3.9	18	12
SEP					
17...	--	--	11	26	23

DATE	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)
OCT									
17...	.0	.00	.00	.0	.00	.00	.00	.00	.00
DEC									
12...	.0	.00	.00	.0	.00	.00	.00	.00	.00
JAN									
14...	.0	.00	.00	.0	.00	.00	.00	.00	.00
FEB									
11...	.0	.00	.00	.0	.00	.00	.00	.00	.00
MAR									
11...	.0	.00	.00	.0	.00	.00	.00	.00	.00
18...	.0	.00	.00	.0	.00	.00	.00	.00	.00
18...	.0	.00	.00	.0	.00	.00	.00	.00	.00
19...	.0	.00	.00	.0	.00	.00	.00	.00	.00
22...	.1	.00	.10	.0	.00	.00	.00	.00	.00
APR									
16...	.0	.00	.00	.0	.00	.00	.00	.00	.00
MAY									
02...	.0	.00	.40	.0	.00	.00	.00	.00	.00
13...	.0	.00	.20	.0	.00	.00	.00	.00	.00
JUN									
17...	.0	.00	.50	.0	.00	.00	.00	.00	.00
JUL									
09...	.0	.00	.50	.0	.00	.00	.00	.00	.00
15...	.1	.00	.40	.0	.00	.00	.00	.00	.00
SEP									
17...	.0	.00	.10	.0	.00	.00	.00	.00	.00

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ENDRIN, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)
OCT									
17...	.00	.00	.00	.00	.00	.00	.00	.00	.0
DEC									
12...	.00	.00	.00	.00	.00	.00	.00	.00	.0
JAN									
14...	.00	.00	.00	.00	.00	.00	.00	.00	.2
FEB									
11...	.00	.00	.00	.00	.00	.00	.00	.00	.0
MAR									
11...	.00	.00	.00	.00	.00	.00	.00	.00	.0
18...	.00	.00	.00	.00	.00	.00	.00	.00	.0
18...	.00	.00	.00	.00	.00	.00	.00	.00	.0
19...	.00	.00	.00	.00	.00	.00	.00	.00	.0
22...	.00	.00	.00	.00	.00	.00	.00	.00	.1
APR									
16...	.00	.00	.00	.00	.00	.00	.00	.00	.0
MAY									
02...	.00	.00	.00	.00	.00	.00	.00	.00	.1
13...	.00	.00	.00	.00	.00	.00	.00	.00	.1
JUN									
17...	.00	.00	.00	.00	.00	.00	.00	.00	.0
JUL									
09...	.00	.00	.00	.00	.00	.00	.00	.00	.1
15...	.00	.00	.00	.00	.00	.00	.00	.00	.1
SEP									
17...	.00	.00	.00	.00	.00	.00	.00	.00	.0

DATE	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT								
17...	.0	--	.0	.0	0	.00	.00	.00
DEC								
12...	.0	--	.0	.0	0	.00	.00	.00
JAN								
14...	.0	--	.0	.0	0	.00	.00	.00
FEB								
11...	.0	--	.0	.0	0	.00	.00	.00
MAR								
11...	.0	--	.0	.0	0	.00	.00	.00
18...	.0	--	.0	.0	0	.00	.00	.00
18...	.0	--	.0	.0	0	.00	.00	.00
19...	.0	--	.0	.0	0	.00	.00	.00
22...	.1	--	.0	.0	0	.02	.00	.00
APR								
16...	.1	--	.0	.0	0	.00	.00	.00
MAY								
02...	.1	--	.0	.0	0	.03	.00	.00
13...	.1	--	.0	.0	0	.01	.00	.00
JUN								
17...	.3	--	.0	.0	0	--	--	--
JUL								
09...	.3	--	.0	.0	0	.07	.00	.00
15...	.2	--	.0	.0	0	.07	.00	.00
SEP								
17...	.1	.000	.0	.0	0	.00	.00	.00

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	PHYTO-PLANK-TON, TOTAL (CELLS PER ML)	SESTON, TOTAL (MG/L)	SESTON ASH WEIGHT (MG/L)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)
OCT					
11...	--	--	--	.000	.000
17...	--	--	--	.000	.000
NOV					
27...	3500	--	--	3.16	.000
DEC					
12...	--	--	--	1.23	.000
JAN					
14...	--	--	--	1.82	.000
FEB					
11...	--	--	--	.490	.000
MAR					
11...	3900	--	--	18.4	.570
18...	--	--	--	54.5	.000
18...	--	--	--	63.7	.000
18...	--	--	--	76.7	.000
19...	--	--	--	79.7	1.70
19...	--	--	--	81.0	.000
22...	--	--	--	75.0	.000
22...	--	--	--	40.2	.000
24...	--	--	--	19.6	.000
APR					
01...	--	--	--	9.33	.000
02...	--	--	--	17.3	.000
APR					
02...	--	--	--	17.0	.000
03...	--	--	--	17.3	.000
16...	--	--	--	5.60	.000
MAY					
02...	--	--	--	6.78	.400
02...	--	--	--	4.56	.000
13...	32000	--	--	--	--
JUN					
17...	46000	--	--	15.7	3.09
23...	--	--	--	15.9	3.02
24...	--	--	--	11.7	2.11
24...	--	--	--	15.2	3.87
25...	--	--	--	13.9	3.08
25...	--	--	--	18.3	5.39
26...	--	20	13	17.8	.000
JUL					
09...	--	--	--	13.7	3.18
15...	--	--	--	29.1	3.33
AUG					
13...	9600	--	--	--	--
SEP					
17...	790	--	--	.110	.000

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT			
11...	148	27500	--
17...	32	2450	94
NOV			
27...	9	209	90
DEC			
12...	3	72	83
JAN			
14...	15	413	100
FEB			
11...	4	79	46
MAR			
11...	4	161	95
18...	55	3510	--
18...	30	2120	--
18...	32	2500	--
19...	137	15200	--
19...	117	13600	--
22...	852	132000	--
22...	670	104000	--
22...	530	84900	--
23...	215	32300	--
23...	135	19800	--
24...	101	11500	--
APR			
01...	75	8750	--
APR			
02...	135	21800	--
02...	141	22800	--
03...	187	25900	--
16...	92	10300	--
MAY			
02...	200	39900	86
02...	235	48600	83
02...	240	49500	88
03...	357	55100	97
13...	16	536	--
JUN			
17...	19	375	96
23...	13	203	98
24...	12	177	92
24...	13	181	98
25...	13	179	98
25...	12	155	98
26...	14	176	98
JUL			
09...	25	281	97
AUG			
13...	14	91	78
SEP			
17...	25	87	95

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
MAR							
19...	1100	41800	--	105	11900	49	64
19...	1400	43400	--	112	13100	41	52
22...	1200	56600	--	708	108000	48	65
22...	1400	57900	--	558	91900	45	62
22...	1615	59100	--	508	81100	46	65
22...	1810	60400	--	461	75200	47	68
23...	1430	54600	--	135	19900	54	67
24...	1220	42300	--	101	11500	56	71
APR							
01...	1400	42700	--	75	8650	61	74
02...	1400	59980	--	144	23300	51	63
MAY							
02...	1130	73800	13.5	200	39900	47	58
02...	1530	76600	13.5	235	48600	44	54
02...	1800	76400	13.5	240	49500	45	58
03...	1230	57200	14.5	357	55100	58	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
MAR							
19...	70	83	91	98	100	--	--
19...	65	77	91	97	100	--	--
22...	83	93	98	99	100	--	--
22...	79	90	98	99	100	--	--
22...	82	93	97	99	100	--	--
22...	83	92	97	99	100	--	--
23...	78	86	94	97	99	100	--
24...	84	92	98	99	100	--	--
APR							
01...	84	91	96	98	100	--	--
02...	76	86	93	98	100	--	--
MAY							
02...	66	77	86	95	99	100	--
02...	65	74	83	93	97	99	100
02...	69	78	88	95	99	100	--
03...	84	92	97	99	99	100	--

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	211	128	170	310	306	308	184	181	182	215	211	214
2	153	115	145	312	309	311	191	183	187	220	215	218
3	234	155	193	311	305	308	199	191	195	229	220	226
4	239	207	224	307	---	---	211	198	205	240	229	233
5	233	165	190	---	---	---	221	211	216	246	236	241
6	185	164	172	---	---	---	231	220	226	251	240	245
7	194	165	183	---	---	---	243	231	235	259	247	252
8	166	160	163	---	---	---	253	243	248	267	257	263
9	182	167	173	---	---	---	256	253	254	272	267	270
10	---	---	---	---	---	---	267	254	261	275	270	273
11	---	---	---	---	---	---	274	267	272	285	270	274
12	190	167	176	---	---	---	280	273	276	286	277	279
13	174	167	169	---	---	---	284	280	283	278	272	274
14	185	174	181	---	---	---	284	280	282	290	272	279
15	192	185	189	---	---	---	286	280	283	295	292	294
16	200	192	196	---	---	---	294	283	288	297	286	292
17	206	201	203	---	---	---	298	294	297	283	179	222
18	218	211	214	---	---	---	303	296	300	177	159	165
19	227	218	222	---	---	---	295	285	289	172	157	164
20	237	227	232	---	---	---	297	285	292	185	174	180
21	248	237	244	312	273	281	296	282	290	---	---	---
22	260	248	255	273	270	271	298	281	290	186	181	184
23	---	---	---	272	269	271	297	282	290	188	184	186
24	---	---	---	277	270	273	283	280	281	---	---	---
25	280	273	275	279	274	277	284	278	280	203	190	197
26	291	281	286	280	275	278	286	272	280	207	203	205
27	297	291	294	280	279	280	277	261	271	214	207	211
28	301	296	299	287	272	280	253	197	211	225	---	---
29	296	290	293	271	205	219	202	195	198	---	---	---
30	298	292	295	205	184	188	206	200	205	---	---	---
31	305	298	302	---	---	---	210	203	206	---	---	---
MONTH	305	115	220	312	184	273	303	181	254	297	157	234

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	245	237	240				---	---	---
2	---	---	---	250	244	247				---	---	---
3	---	---	---	257	247	252				---	---	---
4	267	213	217	266	259	262				---	---	---
5	226	216	220	286	264	274				---	---	---
6	235	228	232	281	273	278				---	---	---
7	238	227	235	---	---	---				---	---	---
8	233	228	230	---	---	---				---	---	---
9	244	233	239	---	---	---				---	---	---
10	258	243	252	---	---	---				---	---	---
11	254	251	253	---	---	---				---	---	---
12	260	255	258	---	---	---				---	---	---
13	266	262	264	---	---	---				---	---	---
14	271	262	266	---	---	---				---	---	---
15	276	274	275	---	---	---				---	---	---
16	282	275	277	---	---	---				---	---	---
17	282	278	281	---	---	---				---	---	---
18	284	282	283	---	---	---				---	---	---
19	295	288	291	---	---	---				---	---	---
20	297	290	291	---	---	---				---	---	---
21	296	290	293	---	---	---				---	---	---
22	301	292	297	---	---	---				---	---	---
23	302	296	299	---	---	---				---	---	---
24	299	293	295	---	---	---				---	---	---
25	305	299	298	---	---	---				---	---	---
26	323	305	316	---	---	---				---	---	---
27	306	298	298	---	---	---				---	---	---
28	329	278	313	---	---	---				---	---	---
29	275	236	250	---	---	---				263	234	241
30	---	---	---	---	---	---				236	233	234
31	---	---	---	---	---	---				241	234	236
MONTH	329	213	270	286	237	259				263	233	237

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	241	237	240	304	295	299	348	340	341	312	308	310
2	250	240	244	306	304	305	354	341	347	318	311	313
3	262	249	254	305	283	295	362	356	358	325	318	321
4	269	263	266	309	281	291	356	328	341	330	323	326
5	268	166	261	319	310	314	327	315	322	334	329	332
6	270	265	266	325	313	317	314	309	312	344	335	340
7	270	262	266	331	325	328	335	315	326	344	342	343
8	271	266	268	330	312	320	350	336	345	349	338	344
9	273	268	270	328	297	311	350	341	347	353	348	350
10	274	263	269	340	321	331	339	314	335	359	347	353
11	291	265	276	386	330	352	324	318	322	355	345	348
12	297	292	295	409	389	402	324	316	320	368	355	363
13	294	273	282	408	369	395	335	321	327	369	362	366
14	277	268	273	365	320	334	359	335	348	362	355	359
15	274	---	---	353	340	349	363	313	355	361	357	359
16	---	---	---	342	321	329	343	318	326	363	357	359
17	283	268	277	326	317	324	336	322	331	382	363	371
18	290	281	285	318	307	310	355	337	349	397	380	388
19	300	290	295	312	303	308	367	310	335	402	396	399
20	303	292	297	303	288	295	338	318	330	406	399	402
21	298	286	292	293	285	290	380	336	351	408	404	405
22	294	286	288	292	271	277	395	375	382	424	408	416
23	313	294	301	284	264	274	434	397	409	435	424	430
24	319	314	318	321	286	304	459	431	449	437	433	435
25	313	285	296	322	299	310	463	430	448	436	411	430
26	285	278	281	330	300	316	433	368	394	434	425	430
27	289	282	285	332	326	330	367	323	346	433	424	429
28	291	287	289	328	319	323	322	300	310	436	432	434
29	295	289	291	328	318	322	300	297	298	439	434	437
30	299	292	295	339	329	334	303	297	300	435	428	432
31	---	---	---	345	340	343	309	302	305	---	---	---
MONTH	319	166	279	409	264	320	463	297	345	439	308	377

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.9	7.6	7.7	8.3	8.1	8.2	7.9	7.8	7.8	8.3	8.0	8.2
2	7.4	7.3	7.4	8.3	8.1	8.2	8.0	7.8	7.9	8.3	8.1	8.2
3	7.8	7.4	7.6	8.3	8.1	8.2	8.1	7.9	8.0	8.3	8.1	8.2
4	7.8	7.7	7.7	8.2	---	---	8.1	7.9	8.1	8.3	8.1	8.2
5	7.7	7.6	7.6	---	---	---	8.2	8.0	8.1	8.3	8.1	8.2
6	7.7	7.6	7.6	---	---	---	8.2	8.1	8.1	8.4	8.1	8.3
7	7.7	7.7	7.7	---	---	---	8.3	8.1	8.2	8.4	7.5	8.2
8	7.7	7.7	7.7	---	---	---	8.4	8.1	8.2	8.4	8.0	8.2
9	7.7	7.7	7.7	---	---	---	8.4	8.2	8.3	8.4	8.2	8.4
10	7.8	---	---	---	---	---	8.5	8.2	8.4	8.5	8.4	8.4
11	7.7	---	---	---	---	---	8.6	8.3	8.5	8.5	8.3	8.4
12	7.7	7.7	7.7	---	---	---	8.6	8.4	8.5	8.3	8.2	8.3
13	7.7	7.6	7.7	---	---	---	8.6	8.3	8.4	8.4	8.2	8.3
14	7.8	7.7	7.8	---	---	---	8.6	8.2	8.5	8.4	8.2	8.3
15	7.8	7.8	7.8	---	---	---	8.6	8.4	8.5	8.2	8.2	8.2
16	7.8	7.8	7.8	---	---	---	8.7	8.4	8.6	8.3	8.0	8.1
17	7.8	7.8	7.8	---	---	---	8.6	8.4	8.5	7.9	7.8	7.9
18	7.9	7.8	7.8	---	---	---	8.7	8.4	8.6	7.9	7.8	7.8
19	7.9	7.8	7.9	---	---	---	8.7	8.4	8.5	7.8	7.7	7.8
20	7.9	7.9	7.9	---	---	---	8.5	8.4	8.4	7.9	7.8	7.9
21	8.0	7.9	7.9	8.5	8.4	8.4	8.6	8.3	8.5	8.0	---	---
22	8.0	7.9	8.0	8.6	8.3	8.5	8.7	8.4	8.5	8.0	7.9	7.9
23	---	---	---	8.7	8.4	8.5	8.7	8.4	8.6	8.0	7.9	8.0
24	---	---	---	8.7	8.4	8.6	8.8	8.6	8.7	---	---	---
25	8.0	8.0	8.0	8.7	8.3	8.5	8.8	8.6	8.7	8.1	8.0	8.0
26	8.0	8.0	8.0	8.6	8.3	8.4	8.8	8.4	8.6	8.2	8.0	8.1
27	8.1	8.0	8.0	8.5	8.3	8.4	8.4	8.0	8.1	8.3	8.1	8.2
28	8.1	8.0	8.0	8.5	8.0	8.3	8.0	7.9	7.9	8.3	---	---
29	8.1	8.0	8.0	8.0	7.8	7.9	7.9	7.8	7.9	---	---	---
30	8.1	8.0	8.1	7.9	7.8	7.8	8.0	7.8	7.9	---	---	---
31	8.2	8.0	8.1	---	---	---	8.2	---	---	---	---	---
MONTH	8.2	7.3	7.8	8.7	7.8	8.3	8.8	7.8	8.3	8.5	7.5	8.2

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	9.0	8.7	8.8				---	---	---
2	---	---	---	9.2	8.8	9.0				---	---	---
3	---	---	---	9.2	9.0	9.1				---	---	---
4	8.5	8.4	8.4	9.3	9.1	9.2				---	---	---
5	8.5	8.3	8.4	9.2	9.1	9.2				---	---	---
6	8.4	8.2	8.3	9.2	9.1	9.2				---	---	---
7	8.4	8.3	8.3	---	---	---				---	---	---
8	8.4	8.3	8.4	---	---	---				---	---	---
9	8.4	8.3	8.4	---	---	---				---	---	---
10	8.4	8.4	8.4	---	---	---				---	---	---
11	8.5	8.4	8.4	---	---	---				---	---	---
12	8.5	8.4	8.5	---	---	---				---	---	---
13	8.6	8.5	8.5	---	---	---				---	---	---
14	8.6	8.5	8.6	---	---	---				---	---	---
15	8.6	8.5	8.6	---	---	---				---	---	---
16	8.6	8.5	8.6	---	---	---				---	---	---
17	8.7	8.5	8.6	---	---	---				---	---	---
18	8.8	8.6	8.7	---	---	---				---	---	---
19	8.9	8.6	8.8	---	---	---				---	---	---
20	9.1	8.7	9.0	---	---	---				---	---	---
21	9.1	8.9	9.0	---	---	---				---	---	---
22	9.1	8.8	8.9	---	---	---				---	---	---
23	9.0	8.8	8.9	---	---	---				---	---	---
24	9.0	8.8	8.9	---	---	---				---	---	---
25	9.0	8.8	8.9	---	---	---				---	---	---
26	8.9	8.7	8.9	---	---	---				---	---	---
27	9.0	8.6	8.8	---	---	---				---	---	---
28	8.7	8.2	8.4	---	---	---				---	---	---
29	8.7	8.3	8.5	---	---	---				7.6	7.6	7.6
30	---	---	---	---	---	---				7.7	7.6	7.6
31	---	---	---	---	---	---				7.7	7.6	7.6
MONTH	9.1	8.2	8.6	9.3	8.7	9.1				7.7	7.6	7.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.9	7.7	7.8	8.0	7.8	7.9	7.9	7.6	7.8	8.0	7.7	7.8
2	8.4	8.0	8.3	8.4	8.0	8.3	7.9	7.6	7.8	8.0	7.7	7.9
3	8.5	8.1	8.3	8.2	7.7	7.9	8.1	7.7	7.8	8.0	7.7	7.9
4	8.3	8.2	8.3	8.2	7.5	7.8	7.9	7.6	7.8	8.0	7.7	7.9
5	8.5	8.3	8.4	8.5	7.7	8.1	7.7	7.6	7.6	7.9	7.7	7.8
6	8.6	8.4	8.5	8.3	7.7	8.0	7.8	7.5	7.6	8.0	7.6	7.8
7	8.4	8.1	8.3	8.5	7.8	8.1	7.9	7.5	7.7	7.9	7.7	7.8
8	8.4	7.8	8.1	8.1	7.6	7.7	7.9	7.5	7.7	8.0	7.7	7.9
9	8.6	7.4	8.3	7.9	7.6	7.7	7.9	7.5	7.7	7.9	7.7	7.8
10	8.3	7.7	8.1	8.1	7.7	7.9	7.8	7.4	7.6	7.9	7.7	7.8
11	8.7	7.8	8.6	8.2	7.8	8.0	7.8	7.4	7.6	8.0	7.7	7.9
12	8.7	8.4	8.5	8.1	7.9	8.0	7.7	7.4	7.5	8.0	7.7	7.9
13	8.7	8.4	8.6	8.4	7.9	8.1	7.9	7.5	7.6	8.0	7.8	7.9
14	8.8	8.5	8.6	8.5	7.9	8.2	7.9	7.5	7.7	8.0	7.8	7.9
15	---	---	---	8.7	8.0	8.4	7.7	7.4	7.6	8.0	7.7	7.8
16	---	---	---	8.6	8.1	8.3	7.7	7.5	7.6	8.0	7.8	7.9
17	8.4	7.7	8.1	8.5	7.8	8.1	7.9	7.6	7.7	8.0	7.8	7.9
18	8.4	8.0	8.2	8.4	7.6	8.0	7.7	7.6	7.7	8.0	7.8	7.9
19	8.4	8.1	8.2	8.4	7.6	8.0	7.8	7.6	7.7	8.0	7.8	7.9
20	8.5	8.2	8.4	8.5	7.7	8.1	7.8	7.7	7.8	8.0	7.7	7.9
21	8.5	8.2	8.4	8.5	7.6	8.0	7.8	7.7	7.7	8.0	7.8	7.9
22	8.5	8.0	8.3	8.0	7.5	7.7	7.9	7.7	7.8	8.0	7.8	7.9
23	8.6	8.3	8.4	7.5	7.4	7.4	7.8	7.7	7.8	8.0	7.8	7.9
24	8.5	8.2	8.4	8.0	7.5	7.7	7.8	7.7	7.8	8.0	7.8	7.9
25	8.6	8.1	8.3	7.9	7.6	7.7	7.8	7.6	7.7	7.9	7.8	7.9
26	8.4	8.1	8.2	8.1	7.6	7.8	7.9	7.6	7.7	8.0	7.8	7.9
27	8.6	8.0	8.3	8.5	7.7	8.1	7.9	7.6	7.7	8.0	7.9	8.0
28	8.7	8.1	8.4	8.3	7.7	7.9	8.0	7.6	7.8	8.0	7.9	8.0
29	8.6	8.0	8.3	8.3	7.6	7.9	7.9	7.6	7.8	8.1	7.9	8.0
30	8.4	7.8	8.1	8.4	7.7	8.0	8.0	7.6	7.8	8.1	7.9	8.0
31	---	---	---	8.2	7.6	7.7	8.0	7.7	7.8	---	---	---
MONTH	8.8	7.4	8.3	8.7	7.4	8.0	8.1	7.4	7.7	8.1	7.6	7.9

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.5	18.5	19.0	12.0	11.5	12.0	8.5	7.5	8.0	5.0	4.5	4.5
2	18.5	18.5	18.5	13.5	12.0	13.0	7.5	6.0	6.5	4.5	3.5	4.0
3	19.5	18.5	19.0	13.0	12.0	12.5	6.0	5.0	5.5	4.0	3.5	4.0
4	19.0	18.5	18.5	15.0	11.5	13.0	5.0	4.5	5.0	4.0	3.0	3.5
5	18.5	17.0	18.0	14.0	12.0	13.0	5.5	4.5	5.0	3.0	2.0	2.5
6	16.5	16.0	16.5	---	---	---	5.5	5.0	5.5	2.0	1.5	1.5
7	16.0	14.5	15.5	---	---	---	6.0	5.5	5.5	2.0	1.5	2.0
8	14.5	14.0	14.5	---	---	---	6.0	5.5	6.0	2.5	1.5	2.0
9	14.5	14.0	14.0	---	---	---	5.5	5.0	5.5	2.5	2.0	2.5
10	---	---	---	---	---	---	5.5	5.0	5.5	2.5	2.0	2.0
11	---	---	---	---	---	---	6.0	5.0	5.5	2.5	2.0	2.5
12	12.0	11.5	11.5	---	---	---	7.0	6.0	6.5	2.5	2.0	2.5
13	12.0	11.5	11.5	---	---	---	7.5	7.0	7.5	2.0	2.0	2.0
14	11.5	11.0	11.0	---	---	---	7.5	6.5	7.0	2.5	2.0	2.5
15	12.0	11.0	11.5	---	---	---	6.5	5.5	6.0	3.0	2.5	2.5
16	12.0	11.0	11.5	---	---	---	6.0	5.5	6.0	5.5	3.5	4.0
17	12.0	11.5	12.0	---	---	---	6.0	5.0	5.5	6.5	3.5	4.5
18	13.5	12.5	13.0	---	---	---	3.5	3.0	3.0	6.5	6.0	6.5
19	14.5	13.0	13.5	---	---	---	3.0	2.5	2.5	9.0	5.0	6.5
20	15.0	14.0	14.5	---	---	---	2.5	2.5	2.5	9.0	5.5	6.0
21	16.5	15.0	15.5	10.0	9.5	9.5	3.0	2.5	3.0	---	---	---
22	17.5	16.0	16.5	10.0	9.5	10.0	3.5	3.0	3.0	6.5	5.0	5.5
23	---	---	---	10.5	10.0	10.5	4.0	3.0	3.5	5.0	4.0	5.0
24	---	---	---	12.0	10.5	11.5	5.5	4.0	5.0	---	---	---
25	14.5	13.0	13.5	13.0	12.0	12.5	7.0	5.5	6.5	4.5	3.5	4.0
26	13.0	12.0	12.5	14.5	13.0	14.0	6.5	6.5	6.5	4.5	3.0	3.5
27	12.0	11.5	11.5	14.5	14.0	14.0	7.0	5.5	6.0	4.0	3.0	3.5
28	11.5	11.0	11.5	17.5	12.5	14.0	11.5	6.0	7.0	---	3.5	---
29	12.0	11.0	11.0	13.5	10.0	11.5	11.0	6.0	7.0	---	---	---
30	11.5	11.0	11.5	10.0	8.5	9.0	10.5	6.0	7.5	---	---	---
31	12.0	11.5	11.5	---	---	---	6.5	5.0	5.5	---	---	---
MONTH	19.5	11.0	14.0	17.5	8.5	12.0	11.5	2.5	5.5	9.0	1.5	3.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	3.0	1.5	2.5				---	---	---
2	---	---	---	1.5	1.0	1.5				---	---	---
3	---	---	---	2.0	1.0	1.0				---	---	---
4	.5	.5	.5	2.5	1.5	2.0				---	---	---
5	1.0	.5	.5	4.0	2.5	3.5				---	---	---
6	.5	.5	.5	5.0	4.0	4.5				---	---	---
7	1.0	.5	.5	---	---	---				---	---	---
8	1.0	.5	.5	---	---	---				---	---	---
9	1.0	.5	1.0	---	---	---				---	---	---
10	1.5	.5	1.0	---	---	---				---	---	---
11	1.5	1.0	1.0	---	---	---				---	---	---
12	2.0	1.5	1.5	---	---	---				---	---	---
13	2.0	1.5	2.0	---	---	---				---	---	---
14	3.0	1.5	2.5	---	---	---				---	---	---
15	3.5	2.5	3.0	---	---	---				---	---	---
16	4.0	3.0	3.5	---	---	---				---	---	---
17	3.0	2.0	2.5	---	---	---				---	---	---
18	3.0	2.0	2.0	---	---	---				---	---	---
19	3.0	1.5	2.5	---	---	---				---	---	---
20	4.0	2.5	4.0	---	---	---				---	---	---
21	6.0	4.0	5.0	---	---	---				---	---	---
22	6.5	5.5	6.0	---	---	---				---	---	---
23	7.0	6.5	6.5	---	---	---				---	---	---
24	7.5	7.0	7.5	---	---	---				---	---	---
25	8.0	7.0	7.5	---	---	---				---	---	---
26	8.0	5.5	6.5	---	---	---				---	---	---
27	5.5	4.5	4.5	---	---	---				---	---	---
28	4.5	3.5	4.0	---	---	---				---	---	---
29	4.0	3.0	3.5	---	---	---				22.0	20.5	21.5
30	---	---	---	---	---	---				24.0	22.0	23.0
31	---	---	---	---	---	---				23.5	23.0	23.0
MONTH	8.0	.5	3.0	5.0	1.0	2.5				24.0	20.5	22.5

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.0	23.5	24.5	27.0	26.0	26.5	30.0	28.5	29.5	30.5	29.0	29.5
2	26.5	25.0	25.5	28.5	25.5	27.0	30.0	28.0	29.0	30.5	28.5	29.5
3	26.0	24.0	25.0	28.0	27.0	27.5	30.5	28.0	29.0	30.0	29.0	29.5
4	24.5	23.5	24.0	28.5	26.0	27.5	30.5	28.5	29.5	29.0	26.0	28.5
5	24.0	23.0	23.5	29.5	27.0	28.0	29.5	28.5	29.0	29.0	27.5	28.5
6	23.0	22.5	23.0	29.0	27.5	28.0	31.0	29.0	30.0	29.5	27.5	28.5
7	24.5	22.5	23.5	29.0	26.5	27.5	31.5	29.5	30.5	28.5	27.5	28.0
8	26.0	23.5	25.0	27.5	25.5	26.5	31.5	29.5	30.5	28.5	26.5	27.5
9	23.5	22.5	23.0	26.0	24.5	25.0	31.5	30.0	31.0	27.5	26.5	27.0
10	23.0	21.5	22.5	27.5	25.0	26.0	31.0	30.0	31.0	27.0	26.0	26.5
11	22.0	21.0	21.5	28.0	26.0	27.0	31.5	30.0	30.5	26.0	24.5	25.5
12	22.0	21.0	21.5	28.5	27.0	28.0	30.5	29.5	30.0	25.5	24.0	25.0
13	23.0	21.5	22.0	28.5	27.0	27.5	30.0	29.0	29.5	25.5	24.0	25.0
14	24.0	22.5	23.0	28.5	26.5	27.5	30.0	28.5	29.0	26.0	24.5	25.5
15	---	---	---	29.5	27.0	28.0	29.0	28.0	28.5	25.5	24.5	25.0
16	---	---	---	31.0	28.0	29.5	28.5	27.0	27.5	25.0	24.0	24.5
17	23.0	21.5	22.5	31.5	29.0	30.5	27.5	26.0	26.5	25.0	23.5	24.5
18	23.0	22.0	22.5	32.0	29.5	30.5	26.0	25.0	25.5	25.0	24.0	24.5
19	24.0	22.0	23.0	31.5	29.5	30.5	25.5	24.5	25.0	25.0	23.5	24.0
20	24.5	23.0	24.0	32.5	29.5	31.0	25.5	24.5	25.0	24.5	23.5	24.0
21	24.0	22.5	23.5	33.0	30.5	31.5	25.5	24.5	25.0	26.0	24.0	25.0
22	24.5	23.0	23.5	31.5	30.0	31.0	26.0	24.0	25.0	26.5	24.5	26.0
23	25.5	23.5	24.5	30.0	28.5	29.0	26.0	24.0	24.5	26.5	25.5	26.0
24	26.5	25.0	25.5	29.5	27.5	28.5	26.5	24.5	25.5	25.5	24.5	25.0
25	26.5	25.5	26.0	29.5	27.5	28.5	28.0	25.5	26.5	24.5	23.5	24.0
26	26.0	25.0	25.5	30.0	28.0	29.0	29.0	26.5	27.5	23.5	22.5	23.0
27	27.0	24.5	25.5	30.0	28.5	29.0	29.0	26.5	27.5	22.0	21.0	21.5
28	28.5	26.0	27.0	29.0	28.0	28.5	29.5	27.0	28.0	21.5	20.0	21.0
29	24.5	27.0	28.0	29.0	27.5	28.5	29.5	27.5	28.5	20.5	19.5	20.5
30	28.5	27.0	28.0	29.5	27.5	28.5	29.5	28.0	28.5	20.5	19.5	20.0
31	---	---	---	29.5	28.0	29.0	29.5	28.5	29.0	---	---	---
MONTH	29.5	21.0	24.0	33.0	24.5	28.5	31.5	24.0	28.0	30.5	19.5	25.5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.0	8.9	9.4	11.8	10.7	11.5	13.3	12.7	13.0	---	---	---
2	10.1	8.8	9.5	10.7	10.1	10.4	13.8	12.9	13.6	---	---	---
3	9.3	9.0	9.2	10.6	10.1	10.3	14.3	13.8	14.1	13.3	12.5	12.8
4	9.8	9.3	9.6	10.9	---	---	14.2	5.7	12.8	12.9	12.5	12.7
5	9.6	8.3	9.2	---	---	---	14.6	13.5	14.1	12.7	12.4	12.5
6	10.4	9.4	10.2	---	---	---	14.2	13.4	13.7	13.1	12.4	12.7
7	10.9	10.4	10.6	---	---	---	14.3	13.2	13.8	12.6	10.6	12.1
8	11.0	10.7	10.9	---	---	---	13.8	13.1	13.4	13.1	12.2	12.6
9	10.9	8.2	9.8	---	---	---	14.3	13.4	13.8	12.9	12.3	12.6
10	---	---	---	---	---	---	14.3	13.5	13.9	13.1	12.3	12.7
11	---	---	---	---	---	---	14.4	7.1	13.5	12.6	12.3	12.4
12	12.0	11.7	11.8	---	---	---	14.9	13.3	13.9	12.8	12.2	12.4
13	12.0	11.3	11.8	---	---	---	13.8	13.2	13.5	13.0	12.5	12.7
14	12.1	11.9	12.0	---	---	---	14.7	11.5	13.7	12.7	12.5	12.6
15	12.2	11.6	11.9	---	---	---	15.3	14.0	14.6	12.8	12.6	12.7
16	11.8	11.4	11.6	---	---	---	15.1	14.1	14.5	13.5	12.0	13.0
17	11.6	11.4	11.5	---	---	---	14.1	14.0	14.0	13.3	10.8	12.5
18	11.7	11.4	11.6	---	---	---	15.3	14.4	14.8	11.7	9.4	11.0
19	11.5	11.1	11.4	---	---	---	15.1	11.0	14.5	13.2	9.9	11.9
20	11.2	10.8	11.1	---	---	---	14.5	14.0	14.3	13.2	12.2	12.8
21	10.8	10.3	10.7	---	---	---	14.7	13.4	14.1	---	---	---
22	10.5	10.0	10.4	13.1	12.3	12.7	13.7	12.9	13.3	12.5	10.3	12.2
23	---	---	---	13.0	12.1	12.5	13.7	12.6	13.0	12.4	12.0	12.2
24	---	---	---	12.7	11.7	12.2	12.5	11.9	12.1	---	---	---
25	11.1	10.3	10.9	12.6	11.3	11.9	12.1	10.2	11.2	12.2	12.0	12.1
26	11.4	10.5	10.8	11.5	10.8	11.1	11.4	10.1	11.1	12.7	12.0	12.3
27	11.5	10.0	10.9	11.2	10.8	10.9	---	---	---	12.5	12.0	12.2
28	10.9	10.2	10.6	11.7	7.1	9.7	---	---	---	12.4	---	---
29	11.9	10.7	11.3	12.1	9.7	10.9	---	---	---	---	---	---
30	12.0	11.5	11.8	12.9	12.3	12.6	---	---	---	---	---	---
31	11.9	11.5	11.7	---	---	---	---	---	---	---	---	---
MONTH	12.2	8.2	10.8	13.1	7.1	11.4	15.3	5.7	13.6	13.5	9.4	12.4

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	13.9	12.6	13.2						
2	---	---	---	13.3	12.3	12.7						
3	---	---	---	13.8	12.1	13.0						
4	15.2	13.8	15.0	13.9	12.5	13.2						
5	15.4	14.8	15.0	13.8	12.5	13.1						
6	15.1	14.7	14.9	14.2	12.7	12.9						
7	15.3	14.7	14.9	---	---	---						
8	15.5	14.7	15.0	---	---	---						
9	15.1	14.6	14.8	---	---	---						
10	15.1	14.4	14.7	---	---	---						
11	15.3	14.3	14.7	---	---	---						
12	15.3	14.2	14.6	---	---	---						
13	15.4	14.4	14.9	---	---	---						
14	15.4	14.4	14.8	---	---	---						
15	14.7	14.0	14.3	---	---	---						
16	15.0	12.8	13.3	---	---	---						
17	15.2	14.0	14.6	---	---	---						
18	14.8	13.6	14.2	---	---	---						
19	14.7	13.6	14.1	---	---	---						
20	15.0	13.4	14.6	---	---	---						
21	15.2	13.5	14.3	---	---	---						
22	14.0	13.0	13.5	---	---	---						
23	14.5	12.6	13.4	---	---	---						
24	14.4	12.4	13.4	---	---	---						
25	14.4	10.9	12.4	---	---	---						
26	14.0	9.6	12.2	---	---	---						
27	13.8	13.0	13.3	---	---	---						
28	13.3	12.9	13.0	---	---	---						
29	14.0	12.8	13.4	---	---	---						
30	---	---	---	---	---	---						
31	---	---	---	---	---	---						
MONTH	15.5	9.6	14.1	14.2	12.1	13.0						

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	8.8	8.5	8.6	8.2	7.3	8.0	7.3	6.5	6.8
2	---	---	---	9.3	8.4	8.8	8.5	7.8	8.2	7.5	7.0	7.2
3	---	---	---	8.4	7.3	7.9	8.6	7.8	8.1	7.6	---	---
4	---	---	---	9.0	8.0	8.4	8.4	7.7	8.0	7.3	6.4	6.9
5	---	---	---	9.1	7.7	8.2	8.3	7.8	7.9	8.5	6.3	7.3
6	---	---	---	9.0	7.9	8.4	8.7	7.9	8.3	9.1	8.4	8.8
7	---	---	---	9.4	8.2	8.7	8.6	7.8	8.2	8.8	8.1	8.5
8	---	---	---	8.5	8.0	8.2	8.6	7.8	8.2	8.9	8.3	8.5
9	---	---	---	9.4	8.3	9.0	8.5	7.7	8.1	8.9	7.8	8.5
10	---	---	---	9.2	---	---	8.5	7.6	8.1	9.0	7.8	8.3
11	---	---	---	9.4	8.0	8.6	8.5	7.8	8.1	9.2	8.7	9.0
12	11.0	9.6	10.3	8.8	7.9	8.3	8.5	7.8	8.1	9.3	8.7	9.0
13	10.4	9.2	9.7	9.2	7.8	8.5	8.9	8.2	8.5	9.3	8.7	8.9
14	10.1	8.6	9.3	9.3	8.1	8.7	8.9	8.3	8.6	9.1	8.5	8.8
15	---	---	---	9.3	7.4	8.3	8.9	8.0	8.5	9.2	8.5	8.7
16	---	---	---	8.7	7.5	8.0	9.2	8.0	8.6	9.4	8.6	9.0
17	10.9	9.6	10.2	9.0	7.3	7.8	9.5	8.8	9.2	9.4	8.5	8.9
18	10.6	9.5	10.0	8.3	7.3	7.7	9.4	7.9	8.7	9.3	8.0	8.9
19	10.2	8.9	9.6	8.7	7.4	7.9	9.2	4.1	7.3	10.5	9.5	9.9
20	9.8	8.5	9.1	8.6	7.4	7.9	9.3	8.4	8.9	10.3	9.5	9.7
21	10.0	8.9	9.4	8.3	7.2	7.5	8.9	7.9	8.6	10.3	9.2	9.6
22	10.7	8.6	9.7	7.8	6.0	6.8	9.2	7.6	8.2	10.0	9.1	9.4
23	10.5	9.4	10.0	7.9	6.9	7.5	9.0	7.9	8.4	9.9	9.0	9.3
24	10.1	9.1	9.6	8.4	7.6	8.0	8.7	7.9	8.3	10.2	9.3	9.6
25	10.1	9.1	9.6	8.3	7.6	7.9	8.3	7.7	8.0	9.8	8.2	9.5
26	9.9	9.2	9.5	7.9	7.1	7.5	8.3	7.7	7.9	9.3	8.4	9.1
27	10.1	9.3	9.7	8.8	7.2	8.1	8.0	4.7	7.1	10.3	9.3	9.9
28	10.0	9.2	9.6	8.7	7.6	8.1	8.2	5.4	7.6	10.5	9.8	10.1
29	9.8	8.9	9.2	8.7	7.7	8.1	7.9	7.3	7.5	10.8	10.0	10.3
30	9.6	8.5	9.1	8.7	7.7	8.1	7.7	7.3	7.5	10.6	9.8	10.2
31	---	---	---	8.2	7.6	7.8	7.7	7.1	7.4	---	---	---
MONTH	11.0	8.5	9.6	9.4	6.0	8.1	9.5	4.1	8.1	10.8	6.3	8.9

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POTOMAC RIVER BASIN

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	335	30500	5	135	30	1780	10	397	6	191	5	129
2	380	43500	10	261	15	749	10	362	6	191	10	229
3	240	22000	10	292	10	435	10	337	5	125	1	21
4	210	28000	315	31000	10	386	5	157	5	125	5	97
5	280	42000	300	37000	10	354	5	150	5	125	15	285
6	225	34000	80	7000	10	326	1	28	5	95	5	112
7	235	41500	30	2030	15	500	1	26	5	65	10	238
8	160	21700	25	1430	10	300	1	25	10	195	20	690
9	90	9210	25	1260	5	142	2	49	5	109	50	2190
10	120	16700	20	945	2	53	1	24	5	107	20	788
11	180	33500	20	880	5	50	1	23	5	101	15	603
12	283	60000	20	918	10	238	10	261	5	99	15	591
13	175	30400	10	421	10	232	5	132	5	92	15	579
14	108	13900	20	826	2	49	5	143	2	35	15	620
15	65	7370	10	408	2	52	20	900	2	34	10	400
16	60	5590	10	405	2	58	60	5700	5	84	10	386
17	35	2670	10	389	2	59	85	9500	5	85	20	848
18	30	1960	10	367	2	57	60	5430	5	81	40	3000
19	30	1720	10	348	1	26	55	5350	1	16	100	12000
20	25	1250	10	332	1	25	35	3520	2	31	70	9000
21	25	1110	10	313	1	24	40	4160	2	31	100	12000
22	20	810	5	148	1	24	55	4740	5	84	588	92100
23	20	751	10	283	5	111	35	2500	20	354	178	27900
24	20	751	5	135	20	433	30	1870	5	95	114	13400
25	20	756	5	131	20	455	15	794	35	1000	130	12000
26	15	559	10	268	118	4950	10	472	50	1840	55	4370
27	15	518	10	3500	165	13000	10	429	125	4390	30	2050
28	15	474	205	19000	45	3430	5	200	10	310	15	895
29	10	302	85	8500	40	2410	5	186	35	992	25	1670
30	10	294	45	3330	30	1510	10	346	---	---	60	5140
31	10	286	---	---	10	443	6	198	---	---	70	7690
TOTAL	---	454081	---	122255	---	32661	---	48409	---	11082	---	212021

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	77	9190	80	7450	29	940	18	191	14	129	5	28
2	150	23600	211	38800	27	838	18	194	13	147	5	27
3	170	23000	337	53100	25	844	18	198	12	121	5	26
4	110	11700	160	18000	30	964	17	168	10	93	11	55
5	106	9530	83	7130	28	832	17	162	8	65	10	51
6	80	6200	52	3640	28	753	18	169	7	52	7	38
7	43	2950	40	2370	28	756	18	156	7	52	6	30
8	30	1780	35	1800	28	710	21	196	7	49	8	41
9	45	2700	30	1390	25	625	24	288	7	46	10	51
10	84	6530	25	1050	24	572	29	356	7	44	11	63
11	157	22000	20	767	24	551	39	1060	7	46	9	50
12	223	27400	20	718	24	539	37	886	7	46	7	36
13	120	11300	19	646	24	511	29	542	7	46	6	29
14	85	6590	18	612	24	531	26	399	7	50	6	27
15	65	5070	20	787	39	793	25	329	7	59	6	23
16	90	10500	20	643	49	931	23	265	14	131	5	18
17	125	17100	19	549	40	769	21	240	13	107	4	14
18	118	12300	18	520	30	558	18	183	9	71	2	8.3
19	88	7290	19	569	28	747	18	156	8	58	2	7.4
20	65	4580	25	883	14	345	18	139	7	52	2	6.9
21	50	3020	61	3260	14	279	18	131	13	164	2	7.5
22	40	[illegible]	210	26100	13	227	20	159	65	1450	2	7.4
23	30	[illegible]	240	39300	13	205	21	209	54	986	2	7.5
24	30	1290	170	19400	12	173	25	293	14	203	2	7.9
25	30	1180	105	9750	12	160	20	228	8	96	2	9.2
26	25	931	85	7000	12	149	20	224	8	82	4	18
27	25	985	80	5980	12	140	20	205	8	72	4	17
28	45	2110	75	4410	12	129	20	217	7	56	4	17
29	60	4390	60	2840	12	128	18	174	7	50	3	13
30	70	6330	50	1970	15	158	16	132	6	40	2	8.4
31	---	---	32	1140	---	---	15	118	5	29	---	---
TOTAL	---	245136	---	262414	---	15849	---	8367	---	4692	---	742.5

TOTAL LOAD FOR YEAR: 1417709.5 TONS.

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

PHYTOPLANKTON ANALYSES, AUGUST 1979 TO AUGUST 1979

DATE	AUG 15,79
TIME	1030
TOTAL CELLS/ML	1300
DIVERSITY: DIVISION	1.1
.CLASS	1.1
..ORDER	1.7
...FAMILY	2.4
....GENUS	2.8

ORGANISM	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)		
.CHLOROPHYCEAE		
..CHLOROCOCCALES		
...COELASTRACEAE		
....COELASTRUM	170	13
...OOCYSTACEAE		
....ANKISTRODESMUS	29	2
....KIRCHNERIELLA	43	3
....OOCYSTIS	190	14
...SCENEDESMACEAE		
....SCENEDESMUS	190	14
CHRYSOPHYTA		
.BACILLARIOPHYCEAE		
..PENNALES		
...NAVICULACEAE		
....NAVICULA	14	1
CYANOPHYTA (BLUE-GREEN ALGAE)		
.CYANOPHYCEAE		
..CHROOCOCCALES		
...CHROOCOCCACEAE		
....ANACYSTIS	290#	22
..HORMOGONALES		
...OSCILLATORIACEAE		
....OSCILLATORIA	100	8
....PHORMIDIUM	290#	22
EUGLENOPHYTA (EUGLENOIDS)		
.EUGLENOPHYCEAE		
..EUGLENALES		
...EUGLENACEAE		
....EUGLENA	14	1

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 27,79 1100	MAR 11,80 1100	MAY 13,80 1045	JUN 17,80 1100	AUG 13,80 1400	SEP 17,80 1030
TOTAL CELLS/ML	3500	3900	32000	46000	9600	790
DIVERSITY: DIVISION	1.5	0.9	0.7	1.3	1.1	1.0
.CLASS	1.5	0.9	0.7	1.3	1.1	1.0
..ORDER	0.0	1.7	0.7	1.5	1.1	1.2
...FAMILY	0.0	2.9	0.7	2.4	1.6	1.3
....GENUS	0.0	3.2	0.7	3.1	2.3	1.3

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...CHLOROCOCCACEAE												
....CHLOROCOCCUM	22	1	--	-	--	-	--	-	--	-	--	-
...COELASTRACEAE												
....COELASTRUM	--	-	--	-	--	-	1400	3	900	9	--	-
...HYDRODICTYACEAE												
....PEDIASTRUM	--	-	--	-	--	-	--	-	100	1	--	-
...MICRACTINIACEAE												
....GOLENKINIA	--	-	--	-	--	-	350	1	--	-	--	-
....MICRACTINIUM	--	-	--	-	--	-	1800	4	--	-	--	-
...OOCYSTACEAE												
....ANKISTRODESMUS	44	1	--	-	560	2	4100	9	84	1	--	-
....CHLORELLA	260	8	31	1	--	-	530	1	--	-	--	-
....CHODATELLA	--	-	--	-	--	-	1200	3	*	0	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	710	2	--	-	--	-
....KIRCHNERIELLA	--	-	63	2	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	350	1	--	-	--	-
....SELENASTRUM	--	-	--	-	280	1	890	2	67	1	--	-
....TETRAEDRON	--	-	--	-	--	-	--	-	*	0	--	-
....TREUBARIA	--	-	--	-	--	-	*	0	--	-	--	-
...SCENEDESMACEAE												
....ACTINASTRUM	--	-	--	-	--	-	2800	6	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-	--	-	600	6	--	-
....SCENEDESMUS	--	-	63	2	--	-	16000#	35	2100#	22	26	3
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	110	3	190	5	280	1	890	2	--	-	13	2
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	570#	16	760#	20	29000#	89	3500	8	120	1	13	2
....MELOSIRA	22	1	220	6	--	-	--	-	--	-	52	7
....THALASSIOSIRA	--	-	63	2	--	-	--	-	--	-	--	-
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	22	1	31	1	--	-	--	-	*	0	--	-
...CYMBELLACEAE												
....CYMBELLA	--	-	130	3	--	-	--	-	--	-	--	-
...DIATOMACEAE												
....DIATOMA	260	8	63	2	--	-	--	-	--	-	--	-
...FRAGILARIACEAE												
....FRAGILARIA	--	-	190	5	--	-	--	-	--	-	--	-
....SYNEDRA	130	4	63	2	--	-	--	-	--	-	--	-
...GOMPHONEMATACEAE												
....GOMPHONEMA	22	1	94	2	--	-	--	-	--	-	--	-
...NAVICULACEAE												
....NAVICULA	490	14	1200#	31	--	-	--	-	--	-	13	2
...NITZSCHIACEAE												
....NITZSCHIA	490	14	410	11	--	-	1200	3	84	1	77	10

CONTINUED ...

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE	NOV 27,79		MAR 11,80		MAY 13,80		JUN 17,80		AUG 13,80		SEP 17,80	
TIME	1100		1100		1045		1100		1400		1030	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CRYPTOPHYTA (CRYPTOMONADS)												
.CRYPTOPHYCEAE	66	2	--	-	--	-	--	-	--	-	--	-
..CRYPTOMONADALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS	--	-	--	-	840	3	530	1	--	-	--	-
...CRYPTOMONADACEAE												
....CRYPTOMONAS	--	-	--	-	--	-	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROOCOCCALES												
...CHROOCOCCACEAE												
....AGMENELLUM	--	-	--	-	--	-	--	-	4400#	46	--	-
....ANACYSTIS	--	-	--	-	1700	5	9200#	20	970	10	--	-
..HORMOGONALES												
...OSCILLATORIACEAE												
....OSCILLATORIA	990#	28	--	-	--	-	--	-	--	-	590#	75
....SCHIZOTHRIX	--	-	250	7	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....TRACHELOMONAS	--	-	63	2	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

01648000 ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, DC

LOCATION.--Lat 38°58'21", long 77°02'25", District of Columbia, Hydrologic Unit 02070010, on left bank 125 ft (38 m) downstream from Sherrill Drive Bridge in Rock Creek Park in Washington, and 7.5 mi (12 km) upstream from mouth.

DRAINAGE AREA.--62.2 mi² (161.1 km²).

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 1432: 1933(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 148.87 ft (45.376 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow affected by two upstream reservoirs which control flow from about 25 mi² (65 km²), Needwood Lake on Rock Creek since Sept. 1966 and Bernard Frank Lake on North Branch Rock Creek since February 1968. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--51 years, 62.7 ft³/s (1.776 m³/s), 13.69 in/yr (348 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft³/s (354 m³/s) June 22, 1972, gage height, 16.2 ft (4.94 m), from floodmark, from rating curve extended above 5,640 ft³/s (160 m³/s) on basis of contracted-opening measurements at gage heights 13.19 ft (4.020 m) and 16.2 ft (4.94 m); minimum, 0.5 ft³/s (0.014 m³/s) Oct. 1-7, 1930, gage height, 1.04 ft (0.317 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1530	*2000	56.6	7.81	2.381	Mar. 14	0145	1470	41.6	6.60	2.012
Oct. 10	1315	1230	34.8	5.96	1.817	May 24	2400	1460	41.3	6.56	2.000

Minimum discharge, 11 ft³/s (0.31 m³/s) Sept. 24, gage height, 1.26 ft (0.384 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	948	64	52	45	48	41	191	233	72	37	25	15
2	294	65	51	44	46	41	134	122	67	34	27	17
3	330	107	52	44	45	45	117	127	88	183	33	22
4	198	68	52	45	43	45	153	91	79	51	57	15
5	328	62	51	49	43	119	100	78	55	95	24	15
6	208	61	51	50	42	75	84	70	78	59	25	16
7	163	60	50	50	43	59	75	63	185	33	22	17
8	146	59	49	53	42	56	70	65	128	127	21	14
9	240	61	47	50	42	81	193	59	65	53	21	14
10	700	225	47	46	48	55	94	57	65	102	21	41
11	233	146	47	113	45	51	84	59	53	44	98	16
12	188	181	48	151	43	46	74	71	48	46	51	14
13	187	105	101	78	41	316	69	69	46	65	26	13
14	160	96	67	69	41	405	114	59	44	38	24	15
15	151	79	55	78	41	163	168	51	104	35	124	14
16	144	71	51	60	54	129	93	49	118	32	118	12
17	136	68	48	55	44	115	78	48	55	74	26	12
18	127	63	46	298	41	112	70	254	49	32	70	38
19	116	60	46	280	40	81	65	125	45	27	30	17
20	106	59	46	121	39	70	61	134	42	26	25	15
21	100	57	45	97	41	366	59	384	39	37	23	15
22	95	59	45	104	91	154	58	127	38	72	21	14
23	109	59	46	103	53	121	57	104	37	82	20	13
24	133	60	48	68	60	186	73	402	39	32	19	12
25	92	59	142	61	66	125	76	267	38	31	18	93
26	86	204	67	56	53	77	137	137	37	28	19	22
27	82	94	57	53	44	60	262	117	35	27	17	13
28	82	56	52	52	48	84	242	102	35	26	18	12
29	76	54	49	50	46	404	105	92	40	26	18	12
30	71	52	47	48	---	133	120	84	55	25	16	12
31	66	---	46	48	---	284	---	96	---	31	15	---
TOTAL	6071	2514	1701	2519	1373	4107	3361	3796	1879	1610	1075	570
MEAN	196	83.8	54.9	81.3	47.3	132	112	122	62.6	51.9	34.7	19.0
MAX	948	225	142	298	91	405	262	402	185	183	124	93
MIN	66	52	45	44	39	41	57	48	35	25	15	12
CFSM	3.15	1.35	.88	1.31	.76	2.12	1.80	1.96	1.01	.83	.56	.31
IN.	3.63	1.50	1.02	1.51	.82	2.46	2.01	2.27	1.12	.96	.64	.34

CAL YR 1979 TOTAL 51990 MEAN 142 MAX 3100 MIN 30 CFSM 2.28 IN 31.09
WTR YR 1980 TOTAL 30576 MEAN 83.5 MAX 948 MIN 12 CFSM 1.34 IN 18.29

01649500 NORTHEAST BRANCH ANACOSTIA RIVER AT RIVERDALE, MD

LOCATION.--Lat 38°57'37", long 76°55'34", Prince Georges County, Hydrologic Unit 02070010, on right bank 200 ft (61 m) downstream from bridge on Riverdale Road, 1.8 mi (2.9 km) downstream from Indian Creek, and 1.8 mi (2.9 km) upstream from confluence with Northwest Branch.

DRAINAGE AREA.--72.8 mi² (188.6 km²).

PERIOD OF RECORD.--August 1938 to current year.

REVISED RECORDS.--WDR MD-DE-75-1: 1972(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 12.68 ft (3.865 m) Washington Suburban Sanitary Commission datum. Prior to June 12, 1942, nonrecording gage; June 12, 1942, to Mar. 22, 1966, and Apr. 12, 1967, to Sept. 3, 1969, water-stage recorder, all at bridge at datum 14.00 ft (4.267 m) above mean sea level. Mar. 23, 1966, to Apr. 11, 1967, nonrecording gage 600 ft (183 m) downstream from bridge at datum 9.25 ft (2.819 m) above mean sea level.

REMARKS.--Records fair. Some regulation at low flow by sand and gravel plants above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--42 years, 85.7 ft³/s (2.427 m³/s), 15.98 in/yr (406 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s (340 m³/s) June 22, 1972, gage height, 9.52 ft (2.902 m), from rating curve extended above 3,800 ft³/s (108 m³/s) on basis of the average of contracted-opening and slope-area measurements at gage height 9.52 ft (2.902 m); maximum gage height, 12.93 ft (3.941 m) Oct. 16, 1942; minimum daily discharge, 1.4 ft³/s (0.040 m³/s) Sept. 12, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 23 or 24, 1933, reached a stage of about 15.5 ft (4.72 m), at datum 14.00 ft (4.267 m) above mean sea level, from floodmarks, discharge, 10,500 ft³/s (297 m³/s), from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of velocity-area study.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	0845	*4170	118	7.09	2.161	July 9	2400	2370	67.1	5.44	1.658
Oct. 10	1230	2010	56.9	5.05	1.539	July 22	1845	2130	60.3	5.18	1.579
Mar. 13	1930	2250	63.7	5.31	1.618						

Minimum daily discharge, 7.0 ft³/s (0.20 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	54	57	43	50	50	338	398	49	33	38	12
2	362	75	54	42	50	63	149	183	47	32	36	13
3	795	181	51	41	48	60	112	272	74	144	44	14
4	185	80	52	44	48	58	175	121	65	47	50	11
5	418	66	52	52	46	190	111	87	47	78	28	10
6	197	61	52	59	45	129	88	78	111	37	26	10
7	99	58	51	56	45	69	80	72	215	30	24	16
8	74	56	48	62	45	65	78	74	62	96	21	8.5
9	234	59	45	55	44	70	330	67	37	123	19	8.0
10	1180	239	47	46	44	53	176	63	40	327	32	50
11	345	242	46	200	44	50	104	62	35	60	39	15
12	176	279	47	257	44	45	87	84	33	96	28	10
13	152	140	108	77	44	592	82	85	33	88	20	7.5
14	104	115	71	65	44	628	123	67	32	47	17	8.0
15	84	81	52	62	45	159	152	53	82	45	140	9.0
16	77	73	50	56	77	89	84	50	84	42	73	7.0
17	73	68	47	56	50	94	72	47	42	234	26	9.0
18	69	64	48	523	46	116	69	310	36	80	62	13
19	65	61	45	489	44	75	67	251	34	37	30	12
20	62	60	45	125	44	69	66	185	33	34	26	10
21	61	59	44	83	47	841	63	301	32	200	24	8.5
22	58	59	45	128	100	263	62	128	30	446	20	8.0
23	119	57	45	154	63	108	60	74	29	249	19	8.0
24	127	56	48	81	72	101	78	222	31	68	18	7.5
25	68	54	196	69	117	138	83	140	30	42	18	108
26	62	587	69	63	71	82	179	69	29	36	16	29
27	60	198	51	57	53	71	461	55	29	33	15	16
28	61	90	47	56	60	101	561	51	29	30	15	10
29	59	70	45	55	48	753	342	50	67	29	14	9.5
30	57	61	43	52	---	206	165	48	51	30	13	9.0
31	54	---	43	52	---	657	---	54	---	33	12	---
TOTAL	6747	3403	1744	3260	1578	6045	4597	3801	1548	2906	963	466.5
MEAN	218	113	56.3	105	54.4	195	153	123	51.6	93.7	31.1	15.6
MAX	1210	587	196	523	117	841	561	398	215	446	140	108
MIN	54	54	43	41	44	45	60	47	29	29	12	7.0
CFSM	3.00	1.55	.77	1.44	.75	2.68	2.10	1.69	.71	1.29	.43	.21
IN.	3.45	1.74	.89	1.67	.81	3.09	2.35	1.94	.79	1.48	.49	.24

CAL YR 1979 TOTAL 58750.0 MEAN 161 MAX 3000 MIN 23 CFSM 2.21 IN 30.02
WTR YR 1980 TOTAL 37058.5 MEAN 101 MAX 1210 MIN 7.0 CFSM 1.39 IN 18.94

01650500 NORTHWEST BRANCH ANACOSTIA RIVER NEAR COLESVILLE, MD

LOCATION.--Lat 39°03'55", long 77°01'48", Montgomery County, Hydrologic Unit 02070010, on right bank 400 ft (120 m) upstream from bridge on State Highway 183, 1.5 mi (2.4 km) southwest of Colesville, 3 mi (4.8 km) upstream from Burnt Mills, 10 mi (16.1 km) upstream from Sligo Creek, and 12.5 mi (20.1 km) upstream from confluence with Northeast Branch.

DRAINAGE AREA.--21.1 mi² (54.6 km²).

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1924(M), 1925-26, 1929-30(M), 1933(M), 1939(P), 1940(M), 1943-46, 1948-49(P).
WSP 1903: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 264.75 ft (80.700 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 22, 1932, nonrecording gages in same general vicinity at different datums. Apr. 22, 1932, to Apr. 11, 1934, nonrecording gages at present site and datum.

REMARKS.--Records good. Diversions at low flow since 1962 for irrigation of golf courses above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--57 years, 22.9 ft³/s (0.649 m³/s), 14.74 in/yr (374 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) June 22, 1972, gage height, 15.89 ft (4.843 m), from high-water mark in well, from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of contracted-opening and flow-over-road measurement at gage height 10.99 ft (3.350 m) and computation of flow over Burnt Mills Dam, 3 miles (4.8 km) downstream, adjusted for flow from intervening area, at gage height 15.89 ft (4.843 m); no flow several days during August and September 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	0900	*1190	33.7	8.08	2.463	Mar. 13	2300	766	21.7	6.63	2.021
Oct. 10	0900	614	17.4	5.75	1.753	May 24	1700	981	27.8	7.46	2.274

Minimum discharge, 2.0 ft³/s (0.057 m³/s) Sept. 24, 25, gage height 1.54 ft (0.469 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	349	19	22	17	17	15	70	103	16	18	8.8	3.4
2	93	21	21	17	16	17	38	40	16	9.2	6.5	3.3
3	130	32	20	17	16	17	31	56	25	34	15	4.7
4	38	22	21	17	16	17	47	31	21	17	11	3.4
5	84	20	21	19	15	60	32	27	15	14	6.5	3.2
6	40	20	20	20	14	32	27	24	27	11	5.8	3.2
7	27	20	20	18	16	22	25	23	67	8.8	4.5	3.0
8	23	19	19	19	16	26	25	23	27	26	4.5	2.7
9	49	20	18	18	16	33	65	21	16	52	4.3	2.5
10	339	92	18	17	17	21	34	20	16	47	11	5.6
11	63	69	18	63	16	20	28	20	14	13	20	3.5
12	47	63	18	67	16	18	26	20	14	30	7.4	2.9
13	42	37	37	25	15	184	25	20	13	20	5.4	2.5
14	31	33	27	25	15	179	41	20	13	18	4.5	2.3
15	28	27	20	26	16	45	58	17	31	8.3	21	2.3
16	26	26	20	21	20	30	29	16	36	8.1	13	2.2
17	25	24	18	20	16	29	25	16	17	8.0	5.5	2.4
18	24	23	17	151	15	37	24	73	14	7.3	12	7.8
19	25	22	18	96	15	24	23	39	15	6.6	6.9	3.6
20	23	22	18	33	15	22	22	44	13	6.6	6.5	3.0
21	22	21	19	26	17	198	22	150	12	6.5	5.9	3.1
22	21	22	18	35	34	48	21	38	11	13	5.9	3.0
23	26	22	18	41	24	30	21	25	11	12	5.6	2.7
24	30	21	19	23	24	30	26	186	11	7.9	4.5	2.2
25	22	21	53	23	24	43	27	55	11	6.6	4.7	13
26	20	100	23	21	19	27	42	26	10	6.5	4.7	5.3
27	20	40	20	20	17	24	129	21	10	6.1	4.3	3.3
28	21	28	19	20	18	30	81	19	9.7	5.9	4.1	3.1
29	20	25	21	20	16	181	61	18	19	8.1	3.8	3.0
30	19	23	18	17	---	46	38	17	17	12	3.4	3.1
31	19	---	18	18	---	119	---	20	---	7.5	3.3	---
TOTAL	1746	954	657	970	513	1624	1161	1228	547.7	439.0	230.3	109.3
MEAN	56.3	31.8	21.2	31.3	17.7	52.4	38.7	39.6	18.3	14.2	7.43	3.64
MAX	349	100	53	151	34	198	129	186	67	52	21	13
MIN	19	19	17	17	15	15	21	16	9.7	5.9	3.3	2.2
CFSM	2.67	1.51	1.01	1.48	.84	2.48	1.83	1.88	.87	.67	.35	.17
IN.	3.08	1.68	1.16	1.71	.90	2.86	2.05	2.16	.97	.77	.41	.19

CAL YR 1979 TOTAL 17631.6 MEAN 48.3 MAX 1260 MIN 6.6 CFSM 2.29 IN 31.08
WTR YR 1980 TOTAL 10179.3 MEAN 27.8 MAX 349 MIN 2.2 CFSM 1.32 IN 17.95

01651000 NORTHWEST BRANCH ANACOSTIA RIVER NEAR HYATTSVILLE, MD

LOCATION.--Lat 38°57'09", long 76°58'00", Prince Georges County, Hydrologic Unit 02070010, on right bank at downstream side of bridge on Queens Chapel Road (State Highway 500), 0.8 mi (1.3 km) downstream from Sligo Branch, 1 mi (1.6 km) west of Hyattsville, and 1.6 mi (2.6 km) upstream from confluence with Northeast Branch.

DRAINAGE AREA.--49.4 mi^2 (127.9 km^2).

PERIOD OF RECORD.--July 1938 to current year. Monthly discharge only for July 1938 published in WSP 1302.

REVISED RECORDS.--WSP 971: 1942(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 17.10 ft (5.273 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 22, 1938, nonrecording gage; Oct. 22, 1938, to Sept. 17, 1951, water-stage recorder; Sept. 17, 1951, to Aug. 29, 1952, nonrecording gage and crest-stage gage.

REMARKS.--Records good. Small diversion since 1962 for irrigation of golf courses above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--42 years, 46.9 ft^3/s), (1.328 m^3/s), 12.89 in/yr (327 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft^3/s (510 m^3/s) June 22, 1972, gage height, 14.47 ft (4.410 m), from rating curve extended above 4,000 ft^3/s (113 m^3/s) on the basis of the average of slope-area and step-back-water measurements at gage height 14.47 ft (4.410 m); minimum, 0.2 ft^3/s (0.006 m^3/s) Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft^3/s (48 m^3/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft^3/s)	(m^3/s)	(ft)	(m)			(ft^3/s)	(m^3/s)	(ft)	(m)
Oct. 1	0800	*3780	107	5.27	1.606	June 7	2000	1850	52.4	3.82	1.164

Minimum discharge, 3.2 ft^3/s (0.091 m^3/s) Sept. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	821	41	38	27	32	32	150	203	38	19	16	7.8
2	190	50	38	27	30	54	80	75	34	17	20	8.6
3	363	90	37	27	30	38	65	99	62	120	33	9.6
4	75	48	38	29	30	40	200	53	55	41	45	7.8
5	198	41	39	33	30	105	65	46	33	92	19	6.8
6	87	41	39	35	32	62	55	44	93	30	16	5.9
7	53	40	39	33	31	39	50	44	235	19	14	10
8	48	39	37	36	31	41	50	48	82	98	14	5.2
9	166	43	35	30	32	63	150	41	35	39	11	4.6
10	691	222	36	27	31	41	65	41	39	128	27	34
11	140	158	37	115	32	38	55	44	30	40	96	8.1
12	97	165	36	146	31	36	48	72	28	80	33	5.1
13	93	72	85	44	30	373	48	61	27	44	16	4.4
14	67	66	55	36	30	373	96	47	27	22	14	5.1
15	61	52	37	41	34	89	119	34	85	20	120	6.1
16	54	48	35	32	54	62	53	32	87	20	65	4.0
17	54	44	32	30	33	57	46	32	35	20	16	4.8
18	53	42	32	312	31	80	45	233	29	17	53	9.4
19	51	42	32	234	29	50	44	154	29	16	21	8.9
20	48	41	31	57	31	45	44	123	26	16	17	6.1
21	47	39	29	45	35	400	42	266	24	16	16	5.3
22	49	37	26	82	81	87	42	81	24	110	14	5.2
23	103	38	26	78	46	53	40	58	23	62	13	5.6
24	79	39	28	42	54	58	66	300	22	24	12	4.8
25	48	38	137	39	70	81	57	120	22	19	12	76
26	45	256	41	35	41	46	126	58	22	17	9.9	16
27	43	81	33	33	34	44	275	47	21	16	10	8.1
28	45	54	29	33	45	60	198	42	20	16	9.9	5.9
29	45	46	33	32	26	320	123	40	46	20	9.5	5.8
30	43	39	29	32	---	100	79	38	44	17	8.3	5.6
31	42	---	29	32	---	250	---	47	---	26	7.5	---
TOTAL	3999	2052	1228	1834	1076	3217	2576	2623	1377	1241	788.1	300.6
MEAN	129	68.4	39.6	59.2	37.1	104	85.9	84.6	45.9	40.0	25.4	10.0
MAX	821	256	137	312	81	400	275	300	235	128	120	76
MIN	42	37	26	27	26	32	40	32	20	16	7.5	4.0
CFSM	2.61	1.39	.80	1.20	.75	2.11	1.74	1.71	.93	.81	.51	.20
IN.	3.01	1.55	.92	1.38	.81	2.42	1.94	1.98	1.04	.93	.59	.23

CAL YR 1979 TOTAL 39503.0 MEAN 108 MAX 3450 MIN 13 CFSM 2.19 IN 29.75
WTR YR 1980 TOTAL 22311.7 MEAN 61.0 MAX 821 MIN 4.0 CFSM 1.24 IN 16.80

01653600 PISCATAWAY CREEK AT PISCATAWAY, MD

LOCATION.--Lat 38°42'20", long 76°58'00", Prince Georges County, Hydrologic Unit 02070010, on left bank 75 ft (23 m) downstream from bridge on State Highway 223, at Piscataway, 0.4 mi (0.6 km) upstream from Tinker Creek, and 4.8 mi (7.7 km) upstream from mouth.

DRAINAGE AREA.--39.5 mi² (102.3 km²).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 10 ft (3 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years, 50.0 ft³/s (1.416 m³/s), 17.19 in/yr (437 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,540 ft³/s (242 m³/s) Sept. 6, 1979, gage height, 11.21 ft (3.417 m), from rating curve extended above 1,700 ft³/s (48.1 m³/s) on basis of contracted-opening measurement of peak flow at bridge 100 ft (30 m) upstream; no flow at times in 1966, 1970, 1977, and 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft³/s (12 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 2	0730	496	14.0	6.37	1.942	Oct. 10	2400	*636	18.0	6.79	2.070
Oct. 3	0830	472	13.4	6.29	1.917	Jan. 19	0230	455	12.9	5.78	1.762
Oct. 5	1730	605	17.1	6.72	2.048						

No flow Aug. 15, 27-31, Sept. 1-25, 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	276	50	48	28	42	24	130	94	23	6.0	8.3	.00
2	423	49	46	27	41	27	90	87	22	4.1	8.9	.00
3	415	136	44	26	40	30	70	69	23	5.5	2.4	.00
4	177	100	44	28	39	33	110	54	27	16	1.6	.00
5	334	60	43	33	38	77	70	46	17	7.3	.91	.00
6	380	53	43	32	36	67	60	42	16	11	.99	.00
7	140	51	48	32	36	42	55	37	49	4.7	1.1	.00
8	103	48	41	39	35	40	60	40	28	8.1	.57	.00
9	190	48	37	38	36	36	150	38	17	18	.04	.00
10	400	54	37	33	39	34	87	34	16	7.2	1.8	.00
11	450	97	37	74	36	33	65	31	17	5.2	3.5	.00
12	189	156	36	160	35	31	60	30	14	4.2	3.0	.00
13	300	79	53	60	31	153	59	28	12	4.6	.69	.00
14	270	78	61	51	31	198	87	25	12	2.9	.10	.00
15	149	59	41	46	34	71	98	22	12	2.2	.00	.00
16	123	54	39	42	53	56	69	21	31	1.5	8.8	.00
17	108	50	35	39	38	58	55	20	22	1.0	2.3	.00
18	99	49	31	148	30	62	48	89	14	3.3	1.0	.00
19	95	46	33	314	30	47	44	47	13	2.0	3.2	.00
20	90	45	32	93	32	68	42	44	11	.78	1.9	.00
21	89	43	31	72	36	223	40	248	9.3	.41	1.1	.00
22	84	43	32	82	47	82	40	82	8.2	1.3	.72	.00
23	74	42	31	120	37	65	38	45	7.3	12	.58	.00
24	109	41	33	68	37	100	37	41	6.7	8.1	2.7	.00
25	76	41	67	63	42	82	45	44	6.3	3.3	1.9	.00
26	65	250	43	57	37	62	40	34	6.1	1.6	.30	.95
27	60	140	34	52	29	55	112	26	6.6	1.0	.00	.41
28	58	72	31	50	28	171	213	23	5.7	.61	.00	.00
29	58	60	30	48	27	210	116	21	5.2	.35	.00	.00
30	53	51	30	44	---	140	85	20	11	.14	.00	.00
31	51	---	28	45	---	200	---	32	---	.02	.00	---
TOTAL	5488	2145	1219	2044	1052	2577	2275	1514	468.4	144.41	58.40	1.36
MEAN	177	71.5	39.3	65.9	36.3	83.1	75.8	48.8	15.6	4.66	1.88	.045
MAX	450	250	67	314	53	223	213	248	49	18	8.9	.95
MIN	51	41	28	26	27	24	37	20	5.2	.02	.00	.00
CFSM	4.48	1.81	1.00	1.67	.92	2.10	1.92	1.24	.40	.12	.05	.001
IN.	5.17	2.02	1.15	1.92	.99	2.43	2.14	1.43	.44	.14	.05	.00

CAL YR 1979 TOTAL 35341.20 MEAN 96.8 MAX 4500 MIN 8.0 CFSM 2.45 IN 33.28
WTR YR 1980 TOTAL 18986.57 MEAN 51.9 MAX 450 MIN .00 CFSM 1.31 IN 17.88

01655480 POTOMAC RIVER AT INDIAN HEAD, MD

LOCATION.--Lat 38°36'03", long 77°10'56", Charles County, Hydrologic Unit 02070010, in brick building at end of wooden dock on left bank at U.S. Naval Ordnance Station at Indian Head, and 3.5 mi (5.6 km) above mouth of Mattawoman Creek, and at river mile 84.5 (136.0 km).

DRAINAGE AREA.--12,160 mi² (31,490 km²).

PERIOD OF RECORD.--October 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1977 to current year.
pH: October 1977 to current year.
WATER TEMPERATURES: October 1977 to current year.
DISSOLVED OXYGEN: October 1977 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1977.

REMARKS.--Interruptions in record were due to malfunctions of the recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 3,490 micromhos Nov. 4, 1977; minimum, 116 micromhos May 19, 20, 1978.
pH: Maximum, 9.3 units July 21, Aug. 4, 7, 1980; minimum, 6.6 units Aug. 11, 26, 27, 28, 1980.
WATER TEMPERATURES: Maximum, 33.5°C July 21, 1980; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 15.5 mg/L June 14, 1978; minimum, 3.4 mg/L July 4, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,550 micromhos Sept. 25; minimum, 152 micromhos Mar. 22.
pH: Maximum, 9.3 units July 21, Aug. 4, 7; minimum, 6.6 units Aug. 11, 26, 27, 28.
WATER TEMPERATURES: Maximum, 33.5°C July 21; minimum, 0.0°C on many days during winter periods.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	227	215	221	297	277	287	269	259	265	292	276	283
2	235	211	221	343	275	290	268	226	247	282	242	265
3	238	196	220	299	283	291	235	225	230	257	239	247
4	215	171	194	301	283	293	236	220	229	251	231	242
5	201	179	186	309	287	301	235	215	227	238	224	230
6	242	196	226	307	295	302	230	214	222	236	222	228
7	246	204	226	300	278	293	225	213	219	231	223	226
8	225	211	217	276	256	268	226	212	217	234	220	227
9	235	219	226	261	231	247	219	213	215	232	226	229
10	---	---	---	239	223	231	220	216	218	231	223	227
11	---	---	---	228	214	219	227	219	223	246	228	232
12	235	221	228	220	214	216	236	224	229	246	232	237
13	249	233	242	219	213	216	241	233	236	253	237	246
14	263	245	249	218	210	214	244	236	240	265	251	258
15	263	255	258	216	208	212	247	237	242	275	265	268
16	274	264	269	217	209	213	254	242	248	285	259	272
17	288	280	283	219	209	215	265	248	256	297	273	285
18	288	278	281	220	212	217	258	242	250	299	289	293
19	288	278	283	222	214	218	260	246	251	295	279	288
20	292	278	285	223	213	219	256	246	251	283	247	268
21	296	282	288	230	216	222	258	248	252	253	213	230
22	304	282	292	232	216	225	264	248	257	219	211	215
23	356	284	298	239	223	230	272	254	263	219	213	215
24	306	290	297	241	231	236	274	260	269	219	209	214
25	300	286	294	248	238	242	282	262	273	217	207	212
26	302	286	293	250	242	247	290	262	281	229	209	214
27	298	285	292	263	243	254	292	282	286	235	211	220
28	293	283	288	272	256	263	300	286	294	---	---	---
29	297	283	290	273	261	268	302	290	295	---	---	---
30	295	285	290	268	260	264	300	282	290	---	---	---
31	293	279	287	---	---	---	292	280	286	---	---	---
MONTH	356	171	259	343	208	247	302	212	250	299	207	243

01655480 POTOMAC RIVER AT INDIAN HEAD, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1				---	---	---	203	189	195	230	218	225
2				---	---	---	207	193	200	232	224	228
3				---	---	---	206	194	199	228	206	221
4				---	---	---	201	181	192	208	190	200
5				---	---	---	186	178	182	188	174	181
6				238	218	224	188	174	180	180	170	175
7				232	210	220	183	177	178	176	166	172
8				228	222	224	184	176	181	174	168	171
9				---	---	---	188	180	183	186	166	173
10				---	---	---	199	181	191	180	170	176
11				---	---	---	212	190	204	184	174	178
12				---	---	---	217	203	211	196	174	185
13				---	---	---	219	207	214	202	186	192
14				---	---	---	218	210	214	210	190	200
15				---	---	---	212	190	205	208	194	200
16				---	---	---	198	174	186	194	178	186
17				---	---	---	184	172	177	198	190	188
18				---	---	---	188	172	180	200	182	192
19				218	200	212	194	180	186	---	---	---
20				206	186	197	196	182	188	222	---	---
21				196	154	183	192	182	187	230	204	216
22				168	152	159	192	182	186	258	216	237
23				---	---	---	204	180	190	248	228	239
24				---	---	---	202	188	192	240	224	229
25				---	---	---	198	188	193	228	200	219
26				---	---	---	202	190	195	208	176	196
27				---	---	---	202	190	196	186	172	179
28				---	---	---	212	194	201	184	170	175
29				---	---	---	214	200	206	180	172	176
30				---	---	---	220	202	212	184	174	178
31				192	158	189	---	---	---	186	178	182
MONTH				238	152	201	220	172	193	258	166	195

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	192	178	186	297	239	249	274	262	268	744	316	420
2	192	184	188	252	238	245	---	---	---	560	308	381
3	194	186	189	249	237	243	278	274	276	518	308	350
4	202	188	193	254	240	248	288	256	272	450	304	376
5	204	190	196	256	244	251	280	268	274	498	338	414
6	198	190	194	265	249	255	292	278	284	556	344	424
7	210	194	201	264	248	257	298	278	284	522	328	400
8	216	198	207	259	251	255	294	270	283	460	318	369
9	218	204	213	260	248	255	288	256	273	582	344	437
10	218	204	212	261	249	256	282	248	266	464	320	375
11	218	204	211	264	250	258	286	256	268	380	292	317
12	---	---	---	265	249	256	280	246	262	492	298	358
13	---	---	---	269	249	258	260	242	250	534	324	389
14	---	---	---	270	252	260	286	232	258	664	334	437
15	---	---	---	271	255	263	276	242	256	570	320	374
16	248	236	242	274	262	267	250	230	240	758	318	399
17	252	238	245	271	267	269	244	228	234	1190	558	755
18	---	---	---	328	276	290	246	232	236	1160	352	478
19	---	---	---	296	268	286	308	230	260	622	354	448
20	---	---	---	310	280	297	288	270	277	944	374	584
21	260	252	255	320	266	293	282	266	273	718	374	514
22	262	248	255	278	262	269	280	264	273	910	380	528
23	270	248	256	286	262	273	304	256	271	690	358	502
24	258	246	253	296	274	284	388	254	274	930	348	521
25	258	246	253	296	284	290	354	250	280	1550	426	947
26	260	248	255	290	280	285	460	256	301	1180	468	776
27	266	248	258	290	274	283	572	266	355	624	366	472
28	268	252	260	286	262	279	708	286	406	714	392	520
29	270	252	262	288	282	285	692	306	463	1030	436	556
30	---	---	---	286	270	280	902	318	538	1010	608	822
31	---	---	---	278	266	272	806	342	508	---	---	---
MONTH	270	178	227	328	237	268	902	228	299	1550	292	488

01655480 POTOMAC RIVER AT INDIAN HEAD, MD--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.3	7.2	7.3	7.8	7.5	7.6	7.9	7.7	7.8	8.1	7.9	8.0
2	7.3	7.2	7.3	7.8	7.6	7.6	7.8	7.6	7.7	7.9	7.8	7.9
3	7.4	7.2	7.3	7.8	7.6	7.7	7.8	7.6	7.7	7.9	7.7	7.8
4	7.2	7.0	7.1	7.8	7.7	7.7	7.7	7.6	7.6	7.8	7.7	7.7
5	7.2	7.0	7.0	7.8	7.7	7.7	7.7	7.6	7.6	7.7	7.6	7.7
6	7.4	7.2	7.3	7.8	7.7	7.7	7.7	7.5	7.6	7.7	7.6	7.7
7	7.4	7.3	7.4	7.8	7.7	7.8	7.6	7.5	7.6	7.6	7.6	7.6
8	7.4	7.3	7.4	7.9	7.6	7.7	7.6	7.5	7.6	7.8	7.6	7.7
9	7.4	7.3	7.4	7.7	7.5	7.6	7.7	7.5	7.6	7.8	7.7	7.8
10	---	---	---	7.6	7.5	7.5	7.6	7.5	7.6	7.9	7.7	7.8
11	---	---	---	7.5	7.4	7.5	7.7	7.5	7.6	8.1	7.7	7.8
12	7.3	7.3	7.3	7.6	7.5	7.5	7.7	7.5	7.6	8.0	7.7	7.9
13	7.3	7.3	7.3	7.5	7.5	7.5	7.6	7.6	7.6	8.1	7.7	7.9
14	7.4	7.3	7.3	7.6	7.5	7.6	7.7	7.6	7.6	8.0	7.9	7.9
15	7.4	7.3	7.3	7.7	7.6	7.6	7.7	7.6	7.6	8.0	7.9	7.9
16	7.4	7.4	7.4	7.6	7.5	7.6	7.7	7.6	7.6	8.3	8.0	8.1
17	7.4	7.3	7.4	7.6	7.5	7.5	7.7	7.6	7.6	8.2	8.0	8.1
18	7.4	7.3	7.4	7.6	7.5	7.5	7.8	7.7	7.7	8.0	7.9	8.0
19	7.4	7.4	7.4	7.7	7.5	7.5	7.8	7.7	7.7	8.1	7.9	7.9
20	7.4	7.4	7.4	7.7	7.5	7.5	7.8	7.7	7.7	8.0	7.7	7.9
21	7.5	7.3	7.4	7.7	7.5	7.5	7.8	7.7	7.7	7.8	7.6	7.7
22	7.4	7.3	7.4	7.8	7.5	7.6	7.8	7.7	7.7	7.8	7.6	7.7
23	7.4	7.3	7.4	7.7	7.6	7.6	7.8	7.7	7.7	7.8	7.7	7.7
24	7.6	7.4	7.5	7.7	7.6	7.6	7.7	7.7	7.7	7.9	7.7	7.8
25	7.6	7.5	7.6	7.7	7.6	7.6	7.8	7.7	7.7	7.8	7.7	7.8
26	7.6	7.5	7.6	7.7	7.6	7.6	7.9	7.7	7.8	7.8	7.8	7.8
27	7.7	7.6	7.6	7.8	7.6	7.6	7.9	7.8	7.8	7.8	7.5	7.7
28	7.6	7.5	7.6	7.7	7.6	7.6	7.9	7.9	7.9	---	---	---
29	7.6	7.5	7.6	7.8	7.7	7.8	8.0	7.9	7.9	---	---	---
30	7.7	7.5	7.6	7.9	7.7	7.8	8.0	7.9	8.0	---	---	---
31	7.7	7.6	7.6	---	---	---	8.1	8.0	8.0	---	---	---
MONTH	7.7	7.0	7.4	7.9	7.4	7.6	8.1	7.5	7.7	8.3	7.5	7.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1				---	---	---	7.6	7.5	7.5	7.8	7.6	7.7
2				---	---	---	7.5	7.5	7.5	7.7	7.6	7.6
3				---	---	---	7.5	7.5	7.5	7.7	7.6	7.6
4				---	---	---	7.5	7.4	7.4	7.8	7.6	7.7
5				---	---	---	7.6	7.5	7.6	8.1	7.5	7.6
6				---	---	---	7.6	7.5	7.5	7.8	7.5	7.6
7				---	---	---	7.5	7.4	7.5	7.8	7.4	7.5
8				---	---	---	7.5	7.4	7.4	7.7	7.5	7.6
9				---	---	---	7.5	7.4	7.4	8.0	7.5	7.7
10				---	---	---	7.6	7.4	7.5	8.0	7.5	7.7
11				---	---	---	7.9	7.5	7.6	8.1	7.6	7.7
12				---	---	---	7.8	7.6	7.7	8.5	7.6	7.9
13				---	---	---	7.7	7.6	7.6	8.4	7.6	7.9
14				---	---	---	7.6	7.6	7.6	8.5	7.7	8.0
15				---	---	---	7.9	7.6	7.7	8.6	7.8	8.1
16				---	---	---	7.8	7.6	7.7	8.2	7.7	7.9
17				---	---	---	7.7	7.6	7.7	8.1	7.6	7.8
18				---	---	---	7.7	7.6	7.6	8.0	7.6	7.7
19				---	---	---	7.7	7.6	7.6	8.0	7.5	7.7
20				---	---	---	7.7	7.6	7.6	7.8	7.6	7.7
21				---	---	---	7.8	7.6	7.7	7.8	7.6	7.7
22				---	---	---	7.9	7.6	7.7	8.2	7.6	7.8
23				---	---	---	8.6	7.7	7.9	8.2	7.6	7.7
24				---	---	---	8.7	7.7	8.0	7.8	7.4	7.6
25				---	---	---	8.7	7.7	8.1	7.7	7.4	7.5
26				---	---	---	8.1	7.8	7.9	7.7	7.3	7.5
27				---	---	---	8.3	7.8	7.9	7.5	7.3	7.4
28				---	---	---	8.0	7.7	7.8	7.8	7.3	7.4
29				---	---	---	7.8	7.6	7.7	7.6	7.3	7.4
30				---	---	---	7.9	7.5	7.7	7.7	7.3	7.4
31				7.7	7.6	7.6	---	---	---	7.8	7.3	7.5
MONTH				7.7	7.6	7.6	8.7	7.4	7.7	8.6	7.3	7.7

01655480 POTOMAC RIVER AT INDIAN HEAD, MD--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.8	7.4	7.5	8.2	7.7	8.0	7.7	7.2	7.4	8.6	6.8	7.2
2	7.9	7.4	7.6	8.4	7.5	7.9	---	---	---	8.8	6.8	7.4
3	7.7	7.4	7.5	8.1	7.5	7.8	9.0	8.4	8.7	9.0	7.0	7.6
4	8.1	7.4	7.7	8.4	7.4	7.7	9.3	7.5	8.2	8.3	7.0	7.4
5	8.4	7.5	7.9	8.6	7.3	7.7	8.0	7.4	7.8	8.5	6.9	7.3
6	8.2	7.5	7.8	8.5	7.4	7.9	9.1	7.3	8.0	8.5	6.9	7.3
7	8.3	7.4	7.6	9.0	7.5	8.0	9.3	7.1	7.8	8.5	7.0	7.4
8	7.7	7.4	7.6	8.3	7.4	7.7	9.1	7.1	7.8	8.4	6.9	7.5
9	8.1	7.5	7.7	8.3	7.3	7.6	8.7	7.2	7.7	8.5	7.0	7.5
10	8.3	7.5	7.8	8.2	7.2	7.6	9.0	7.2	7.8	8.0	7.0	7.3
11	8.0	7.6	7.7	8.5	7.3	7.6	9.1	6.6	7.9	8.1	7.0	7.4
12	---	---	---	7.8	7.2	7.5	9.0	7.2	7.8	8.4	7.0	7.5
13	---	---	---	8.2	7.2	7.5	8.8	7.1	7.8	8.4	7.0	7.5
14	---	---	---	8.8	7.2	7.8	9.2	7.1	8.1	8.4	7.0	7.5
15	---	---	---	7.8	7.1	7.4	8.4	7.3	7.8	8.4	7.0	7.4
16	7.9	7.6	7.8	7.6	7.0	7.2	8.7	7.0	7.7	7.9	7.0	7.3
17	7.8	7.5	7.6	7.3	7.0	7.1	9.1	7.0	7.9	7.8	7.0	7.3
18	---	---	---	7.5	7.0	7.2	8.9	7.1	7.8	8.6	6.9	7.3
19	---	---	---	8.5	7.0	7.4	8.4	7.0	7.5	8.7	6.9	7.2
20	---	---	---	9.0	7.1	7.5	8.7	7.0	7.8	7.8	6.9	7.2
21	8.7	7.8	8.2	9.3	7.1	7.8	8.9	7.1	7.9	8.2	6.9	7.3
22	9.0	7.7	8.1	8.7	7.3	7.9	8.8	7.2	7.9	8.0	6.9	7.2
23	8.9	7.6	8.1	8.4	7.3	7.7	8.2	6.9	7.4	7.7	6.9	7.1
24	8.5	7.6	8.0	8.7	7.3	7.8	8.5	6.7	7.3	7.4	6.9	7.0
25	8.2	7.6	7.9	8.9	7.3	7.9	7.3	6.7	6.9	7.2	6.8	7.0
26	8.2	7.6	7.8	8.5	7.2	7.7	7.7	6.6	6.9	7.3	6.8	7.0
27	8.6	7.6	7.9	8.5	7.3	7.8	7.7	6.6	6.9	7.9	6.8	7.2
28	8.3	7.5	7.8	8.2	7.3	7.7	7.6	6.6	7.0	8.2	6.9	7.3
29	7.9	7.4	7.6	8.6	7.3	8.0	7.4	6.7	6.9	7.4	6.9	7.1
30	---	---	---	8.8	7.4	8.0	8.5	6.7	7.2	7.4	7.0	7.2
31	---	---	---	8.6	7.4	7.9	8.5	6.8	7.2	---	---	---
MONTH	9.0	7.4	7.8	9.3	7.0	7.7	9.3	6.6	7.6	9.0	6.8	7.3

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.0	19.5	19.5	14.0	12.5	13.0	10.5	9.0	10.0	5.5	4.5	5.0
2	20.0	19.5	20.0	14.0	13.0	13.5	9.5	7.5	8.5	5.0	4.5	4.5
3	21.0	19.5	20.0	13.0	12.5	12.5	8.0	---	---	5.0	4.0	4.5
4	20.5	19.5	19.5	13.0	11.5	12.5	7.5	6.5	7.0	4.5	3.5	4.0
5	19.5	18.5	19.0	13.0	11.5	12.0	7.5	6.5	7.0	3.5	3.0	3.0
6	18.5	17.5	18.0	12.5	11.5	12.0	7.0	6.5	6.5	3.5	2.5	3.0
7	17.5	16.0	17.0	11.5	11.0	11.5	7.0	6.5	6.5	3.0	3.0	3.0
8	16.5	15.0	16.0	11.5	10.5	11.0	6.5	5.5	6.0	3.5	2.5	3.0
9	15.5	15.0	15.5	11.5	11.0	11.0	6.0	5.0	5.5	3.0	2.5	3.0
10	---	---	---	11.5	11.0	11.5	6.0	5.0	5.5	2.5	2.0	2.5
11	---	---	---	11.5	11.0	11.0	6.0	5.5	5.5	3.5	2.5	2.5
12	13.0	12.0	12.5	11.0	10.5	10.5	7.0	6.0	6.5	3.5	2.5	3.0
13	12.0	11.5	12.0	10.5	10.5	10.5	7.0	6.5	6.5	2.5	1.5	2.0
14	12.0	11.0	11.5	10.5	9.5	10.0	6.5	5.5	6.0	2.5	2.5	2.5
15	12.5	11.0	11.5	9.5	8.5	9.5	6.0	5.5	5.5	3.0	2.5	3.0
16	12.0	11.0	11.5	10.0	9.0	9.5	6.0	5.5	6.0	4.0	2.5	3.0
17	12.5	11.5	12.5	10.5	8.5	9.5	6.0	3.5	5.0	3.5	3.0	3.5
18	13.0	12.0	12.5	10.5	9.0	9.5	4.0	3.0	3.5	4.0	3.5	3.5
19	14.0	12.5	13.0	10.5	9.0	9.5	4.0	3.5	4.0	4.5	3.5	4.0
20	14.5	13.0	13.5	10.5	9.5	10.0	4.0	3.5	3.5	4.5	3.5	4.0
21	16.0	13.5	14.5	10.5	9.5	10.0	4.0	3.0	3.5	4.5	3.5	4.0
22	16.0	14.5	15.5	11.0	10.0	10.5	4.0	3.5	4.0	4.0	3.0	3.5
23	16.5	15.5	16.0	11.0	10.0	10.5	4.5	4.0	4.0	3.5	3.5	3.5
24	15.5	14.5	15.0	11.5	10.5	11.0	5.0	4.0	4.5	3.5	2.0	3.0
25	15.0	13.5	14.5	12.0	11.0	11.5	5.5	4.5	5.0	2.5	1.5	2.0
26	14.5	13.0	14.0	12.5	12.0	12.0	5.5	4.5	5.0	2.0	.5	1.5
27	14.0	12.5	13.5	14.0	12.0	12.5	4.5	4.0	4.5	.5	.0	.0
28	13.0	12.5	13.0	12.5	11.5	12.5	5.0	4.0	4.5	---	---	---
29	14.0	12.5	13.0	12.0	10.5	11.5	5.5	4.0	4.5	---	---	---
30	13.5	12.5	13.0	10.5	9.5	10.0	5.5	4.5	5.0	---	---	---
31	13.5	12.5	13.0	---	---	---	5.5	4.5	5.0	---	---	---
MONTH	21.0	11.0	15.0	14.0	8.5	11.0	10.5	3.0	5.5	5.5	.0	3.0

01655480 POTOMAC RIVER AT INDIAN HEAD, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1				---	---	---	12.0	9.0	10.0	16.0	15.5	15.5
2				---	---	---	11.0	9.5	10.0	16.5	15.5	15.5
3				---	---	---	12.0	10.0	11.0	17.0	15.0	15.5
4				---	---	---	12.5	11.0	11.5	18.0	15.5	16.5
5				---	---	---	12.5	10.5	11.5	18.0	15.5	16.5
6				4.5	3.5	3.5	13.5	10.5	11.5	18.5	17.0	17.5
7				5.0	2.5	3.5	12.5	11.5	12.0	19.0	17.0	18.0
8				4.5	4.0	4.0	12.5	11.5	12.0	18.0	17.0	17.5
9				---	---	---	13.5	12.0	13.0	18.5	16.5	17.5
10				---	---	---	14.5	13.0	13.5	18.5	16.5	17.5
11				---	---	---	16.5	13.5	14.5	18.0	17.0	17.5
12				---	---	---	15.5	14.5	15.0	20.0	17.5	18.5
13				---	---	---	15.5	14.5	15.0	20.0	18.5	19.0
14				---	---	---	15.0	14.5	14.5	21.0	19.5	20.0
15				---	---	---	14.5	13.5	14.0	21.5	18.5	19.5
16				---	---	---	13.5	12.5	13.0	21.5	19.0	20.0
17				---	---	---	14.0	11.5	12.5	20.5	19.0	20.0
18				---	---	---	14.0	12.0	13.0	21.0	19.5	20.0
19				9.0	8.5	8.5	14.0	12.0	13.0	---	---	---
20				9.5	8.0	9.0	15.0	12.5	13.5	---	---	---
21				9.5	9.0	9.5	15.5	13.5	14.0	20.5	20.0	20.5
22				9.0	---	---	16.0	14.0	14.5	24.5	20.0	21.0
23				---	---	---	19.0	14.5	15.5	23.0	20.5	21.0
24				---	---	---	18.5	15.0	16.0	23.0	20.5	21.0
25				---	---	---	17.0	15.5	16.5	22.0	20.5	21.0
26				---	---	---	16.0	15.5	15.5	22.0	19.5	20.5
27				---	---	---	15.5	15.0	15.5	21.0	19.5	20.0
28				---	---	---	15.5	15.0	15.5	22.0	19.5	20.5
29				---	---	---	16.5	14.5	15.5	22.0	20.0	21.0
30				---	---	---	16.5	15.5	16.0	23.0	20.5	21.5
31				9.5	9.5	9.5	---	---	---	23.0	21.0	22.0
MONTH				9.5	2.5	7.0	19.0	9.0	13.5	24.5	15.0	19.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.5	21.5	22.5	27.5	26.0	26.5	29.0	28.5	28.5	29.5	27.5	28.0
2	24.0	22.5	23.5	27.5	25.5	26.0	---	---	---	30.0	27.5	28.5
3	24.5	23.5	23.5	27.0	26.0	26.5	30.0	29.5	29.5	29.5	28.0	28.5
4	24.5	23.0	24.0	28.0	26.0	26.5	31.5	29.0	29.5	29.0	28.0	28.5
5	24.5	22.5	23.5	29.5	26.5	27.5	29.5	29.0	29.0	29.5	27.5	28.5
6	23.5	23.0	23.0	28.5	27.0	27.5	31.0	29.5	30.0	30.5	27.5	28.5
7	25.0	23.0	24.0	29.0	26.5	27.0	32.0	29.5	30.0	29.0	27.5	28.0
8	25.0	23.0	24.0	27.0	25.5	26.0	32.0	29.5	30.5	28.5	27.0	27.5
9	23.5	22.0	23.0	27.5	25.0	26.0	31.0	29.5	30.0	28.0	26.5	27.5
10	23.5	22.0	22.5	27.5	25.5	26.5	31.0	29.5	30.0	27.5	26.5	27.0
11	22.5	21.5	22.0	28.5	26.0	27.0	31.0	29.5	30.5	27.0	25.0	26.0
12	---	---	---	28.0	26.5	27.0	30.5	29.5	30.0	27.0	24.5	26.0
13	---	---	---	29.0	26.0	27.5	30.5	28.5	29.5	27.0	25.0	25.5
14	---	---	---	29.0	26.5	27.5	30.5	28.5	29.5	26.5	25.0	26.0
15	---	---	---	28.5	26.5	27.5	29.5	29.0	29.0	26.5	25.0	25.5
16	24.0	23.0	23.5	30.0	27.5	28.5	29.0	27.5	28.5	25.0	24.5	24.5
17	23.5	22.5	23.0	29.5	28.0	28.5	29.0	26.5	27.5	25.5	24.5	25.0
18	---	---	---	30.5	28.0	28.5	27.5	26.0	26.5	26.0	25.0	25.0
19	---	---	---	30.5	28.0	29.0	27.0	26.0	26.5	26.5	24.5	25.0
20	---	---	---	32.0	28.5	29.5	27.0	26.0	26.5	25.5	24.5	25.0
21	24.5	23.0	23.5	33.5	29.5	30.5	26.0	25.5	26.0	26.5	24.5	25.5
22	27.0	23.0	24.0	31.0	29.5	30.5	26.0	25.0	25.5	27.0	25.0	25.5
23	29.0	23.5	25.0	29.5	29.0	29.5	26.0	25.0	25.5	26.0	25.0	25.5
24	25.5	24.0	24.5	30.5	28.0	29.0	27.5	25.5	26.0	25.0	24.0	24.5
25	25.5	24.0	24.5	31.0	28.5	29.5	27.5	25.5	26.0	24.5	24.0	24.0
26	25.0	24.5	24.5	30.5	28.5	29.0	27.5	25.5	26.5	24.0	23.0	24.0
27	27.0	24.0	25.5	29.5	28.0	29.0	27.5	25.5	26.5	23.5	21.5	23.0
28	27.0	25.0	26.0	29.5	28.0	28.5	28.5	26.0	27.0	23.0	21.5	22.5
29	27.5	26.0	26.5	29.5	28.0	29.0	28.5	26.5	27.5	23.0	21.0	22.0
30	---	---	---	29.5	28.0	29.0	28.5	26.5	27.5	22.0	21.5	21.5
31	---	---	---	30.0	28.0	29.0	28.5	27.0	27.5	---	---	---
MONTH	29.0	21.5	24.0	33.5	25.0	28.0	32.0	25.0	28.0	30.5	21.0	25.5

01655480 POTOMAC RIVER AT INDIAN HEAD, MD--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	10.4	9.3	9.6	10.8	9.7	10.6	13.1	12.7	12.9
2	---	---	---	10.2	9.3	9.6	11.6	10.6	11.2	13.6	12.8	13.1
3	10.2	9.2	9.8	10.3	9.6	10.0	11.9	11.5	11.7	13.4	12.9	13.1
4	9.8	9.2	9.4	10.6	9.9	10.2	11.8	11.4	11.6	13.1	12.9	13.0
5	9.6	8.6	9.1	10.6	9.9	10.2	11.7	11.3	11.4	13.1	12.9	13.0
6	10.4	9.7	10.1	10.5	9.8	10.2	11.4	10.5	11.0	13.3	12.9	13.1
7	11.0	10.0	10.4	11.0	10.1	10.6	11.5	10.5	11.0	13.1	12.9	13.0
8	11.1	10.7	10.9	11.0	10.5	10.8	12.0	11.4	11.7	13.7	13.0	13.2
9	11.1	10.7	10.9	10.7	10.3	10.5	12.3	12.0	12.1	13.6	13.1	13.4
10	---	---	---	10.2	10.0	10.1	12.1	11.8	11.9	13.9	13.3	13.6
11	---	---	---	10.3	10.0	10.2	12.0	11.6	11.8	14.3	13.4	13.6
12	12.4	10.7	11.7	10.6	10.2	10.3	12.0	11.6	11.7	14.0	13.4	13.8
13	12.3	11.8	12.0	10.3	10.2	10.2	11.7	11.5	11.6	14.6	13.7	14.1
14	12.0	11.6	11.8	10.8	10.3	10.6	12.2	11.6	11.9	14.3	14.0	14.1
15	11.7	11.3	11.5	11.0	10.5	10.7	12.2	11.9	12.0	14.1	13.8	13.9
16	11.5	11.0	11.2	10.8	10.3	10.5	12.1	11.7	11.9	14.7	13.9	14.2
17	11.0	10.6	10.8	10.8	10.2	10.4	12.5	11.7	12.2	14.7	13.8	14.2
18	10.7	10.4	10.6	10.4	10.1	10.3	12.7	12.2	12.5	14.0	13.6	13.8
19	10.5	10.2	10.4	10.9	10.1	10.3	12.6	12.3	12.4	14.3	13.5	13.9
20	10.3	9.9	10.1	10.7	10.1	10.2	12.7	12.4	12.5	14.1	13.6	13.9
21	10.0	9.8	9.9	10.7	10.0	10.2	12.7	12.3	12.5	13.6	12.8	13.2
22	9.9	9.6	9.7	11.1	10.1	10.4	12.5	12.3	12.4	13.0	12.7	12.8
23	9.5	9.3	9.4	10.6	10.0	10.2	12.4	12.2	12.3	13.1	12.7	12.9
24	9.8	9.4	9.5	10.4	9.9	10.1	12.2	12.0	12.1	13.2	12.6	13.0
25	9.8	9.4	9.5	10.3	9.8	10.0	12.2	11.9	12.1	13.7	12.6	13.3
26	9.7	9.2	9.4	10.0	9.7	9.8	12.6	12.1	12.4	13.8	13.4	13.6
27	9.8	9.2	9.5	10.8	9.8	10.2	12.7	12.5	12.6	14.1	11.3	13.5
28	9.6	9.2	9.4	10.3	10.0	10.2	13.0	12.7	12.8	---	---	---
29	9.6	9.2	9.3	10.8	10.2	10.4	12.8	12.6	12.7	---	---	---
30	9.9	9.3	9.5	11.0	10.3	10.6	12.8	12.6	12.7	---	---	---
31	10.2	9.3	9.6	---	---	---	12.9	12.6	12.7	---	---	---
MONTH	12.4	8.6	10.2	11.1	9.3	10.3	13.0	9.7	12.0	14.7	11.3	13.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1				---	---	---	12.0	11.6	11.8	9.2	8.3	8.7
2				---	---	---	11.7	11.3	11.5	9.5	8.2	8.9
3				---	---	---	11.9	11.2	11.6	9.8	8.8	9.3
4				---	---	---	11.9	10.9	11.3	10.4	9.2	9.8
5				---	---	---	11.1	10.6	10.8	11.1	9.5	10.0
6				---	---	---	10.6	10.3	10.4	10.5	9.5	---
7				---	---	---	10.4	9.8	10.1	10.3	9.1	9.4
8				---	---	---	10.2	9.9	10.0	9.5	8.9	9.2
9				---	---	---	10.1	9.8	9.9	10.2	8.6	9.2
10				---	---	---	10.5	9.6	10.1	9.9	8.5	9.2
11				---	---	---	11.3	9.7	10.4	10.3	8.5	9.2
12				---	---	---	10.8	9.7	10.1	11.2	8.7	9.6
13				---	---	---	10.1	9.4	9.6	10.5	8.7	9.5
14				---	---	---	9.4	9.0	9.3	10.8	8.7	9.6
15				---	---	---	10.0	9.2	9.5	10.6	8.9	9.5
16				---	---	---	10.0	9.4	9.7	9.7	8.0	8.8
17				---	---	---	10.1	9.7	9.8	9.4	7.7	8.4
18				---	---	---	10.0	9.5	9.8	8.9	7.5	8.1
19				12.0	11.2	11.8	10.1	9.6	9.9	---	---	---
20				11.2	10.8	11.1	10.5	9.9	10.2	---	---	---
21				11.3	10.7	11.0	10.6	9.6	10.1	8.2	7.1	7.7
22				11.1	10.7	10.9	10.9	9.5	10.0	9.1	6.6	7.4
23				---	---	---	12.8	9.7	10.6	9.0	6.2	6.9
24				---	---	---	13.0	10.1	10.8	8.4	6.7	7.2
25				---	---	---	12.7	9.9	10.9	8.7	6.9	7.4
26				---	---	---	10.6	9.4	10.1	8.6	7.2	7.8
27				---	---	---	10.9	9.2	9.8	8.4	7.2	7.8
28				---	---	---	9.9	8.4	9.2	9.1	7.2	7.6
29				---	---	---	9.3	8.2	8.9	8.8	7.2	7.7
30				---	---	---	9.5	8.1	8.6	9.0	7.1	7.8
31				12.2	11.9	12.1	---	---	---	9.2	7.3	8.1
MONTH				12.2	10.7	11.4	13.0	8.1	10.2	11.2	6.2	8.6

01655480 POTOMAC RIVER AT INDIAN HEAD, MD--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.2	7.3	8.1				---	---	---	11.5	5.8	7.7
2	9.0	7.4	8.0				---	---	---	12.2	5.5	8.1
3	8.6	7.2	7.8				---	---	---	13.1	6.7	8.7
4	9.1	7.1	8.1				---	---	---	10.1	6.4	8.0
5	10.1	7.2	8.6				---	---	---	---	---	---
6	9.6	7.3	8.3				11.6	5.3	7.4	---	---	---
7	9.6	6.5	7.6				12.2	4.6	6.6	---	---	---
8	7.9	6.5	7.3				10.3	4.5	6.4	---	---	---
9	8.7	7.2	7.8				14.6	4.6	10.0	---	---	---
10	9.4	7.0	7.9				14.1	4.7	9.4	---	---	---
11	8.5	7.3	7.8				9.3	4.6	6.6	---	---	---
12	---	---	---				9.1	4.9	6.3	---	---	---
13	---	---	---				8.8	4.8	6.4	---	---	---
14	---	---	---				9.7	4.5	6.6	---	---	---
15	---	---	---				7.7	5.2	6.3	---	---	---
16	8.7	7.9	8.3				8.0	4.5	6.0	---	---	---
17	8.5	7.3	7.7				8.9	4.7	6.6	---	---	---
18	---	---	---				7.7	4.5	5.9	---	---	---
19	---	---	---				---	4.2	---	---	---	---
20	---	---	---				---	7.0	---	---	---	---
21	11.7	8.1	9.6				10.5	5.7	8.0	---	---	---
22	12.9	7.5	9.3				10.0	6.3	8.0	---	---	---
23	12.2	7.1	9.0				8.9	5.5	6.9	---	---	---
24	10.1	7.0	8.4				9.9	5.1	6.8	---	---	---
25	9.1	7.3	8.0				7.9	5.0	5.9	---	---	---
26	9.0	5.5	7.8				8.8	4.5	6.0	---	---	---
27	10.5	6.7	7.9				9.2	4.5	6.2	---	---	---
28	9.0	6.0	7.5				9.8	4.8	6.7	---	---	---
29	8.1	5.9	6.9				8.3	5.0	6.5	---	---	---
30	---	---	---				10.2	5.0	7.1	7.7	5.9	6.8
31	---	---	---				9.8	5.5	7.4	---	---	---
MONTH	12.9	5.5	8.1				14.6	4.2	6.9	13.1	5.5	7.9

01661050 ST. CLEMENT CREEK NEAR CLEMENTS, MD

LOCATION.--Lat 38°20'00", long 76°43'31", St. Marys County, Hydrologic Unit 02070011, on left bank 60 ft (18 m) downstream from bridge on State Highway 242, 0.5 mi (0.8 km) north of Clements, 2.3 mi (3.7 km) upstream from mouth, and 5.7 mi (9.2 km) northwest of Leonardtown.

DRAINAGE AREA.--18.5 mi² (47.9 km²).

PERIOD OF RECORD.--October 1968 to current year.

REVISED RECORDS.--WDR MD-DE-79-1: 1974(P).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Altitude of gage is 8 ft (2.4 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years, 22.6 ft³/s (0.640 m³/s), 16.59 in/yr (421 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s (127 m³/s) Sept. 6, 1979, from rating curve extended above 480 ft³/s (13.6 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; maximum gage height, 6.96 ft (2.121 m) Sept. 6, 1979 (backwater from tide); maximum gage height unaffected by backwater, 6.55 ft (1.996 m) June 22, 1972; no flow at times in 1977 and 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 220 ft³/s (6.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1630	259	7.33	3.83	1.167	Nov. 26	1830	289	8.18	4.03	1.228
Oct. 10	2000	*306	8.67	4.12	1.256	Dec. 13	2400	245	6.94	3.73	1.137
Nov. 12	0200	244	6.91	3.72	1.134	Jan. 12	0630	233	6.60	3.64	1.110

No flow, Aug. 17, 18, Aug. 31 to Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228	22	29	21	24	17	39	35	12	1.9	1.2	.00
2	68	25	28	20	21	16	32	33	10	1.6	.72	.00
3	41	86	27	20	22	26	29	27	9.1	1.4	.70	.00
4	29	42	26	20	23	28	30	24	10	1.9	.70	.00
5	63	28	26	24	23	57	33	22	8.7	1.9	.72	.00
6	46	27	28	25	23	50	25	20	7.7	2.4	1.6	.00
7	26	26	35	23	24	31	24	18	10	2.1	1.9	.00
8	22	25	28	29	24	28	23	17	27	2.1	1.2	.00
9	21	25	25	28	25	25	48	19	12	6.6	.63	.00
10	165	25	25	23	26	21	62	18	8.1	4.2	.55	.00
11	138	99	25	46	26	23	32	16	7.3	2.9	.31	.00
12	45	160	25	157	25	19	27	16	6.6	2.7	.24	.00
13	56	51	99	43	23	54	26	15	6.3	4.0	.25	.00
14	52	45	117	35	23	74	29	14	6.0	2.7	.14	.00
15	34	32	37	32	26	31	34	13	5.9	1.7	.00	.00
16	31	32	32	28	37	26	25	12	8.1	1.3	.14	.00
17	29	29	29	27	29	25	23	12	8.0	1.2	.00	.00
18	27	28	25	70	21	30	22	20	6.3	.93	.00	.00
19	26	27	25	115	22	23	22	24	5.4	1.2	.93	.03
20	25	25	26	42	25	22	21	38	5.1	.82	3.2	.24
21	24	25	25	34	27	69	21	50	4.5	.63	1.8	.25
22	24	25	25	40	35	37	20	25	4.0	2.2	1.3	.25
23	24	25	25	68	29	26	20	18	3.7	31	1.2	.24
24	41	25	25	36	26	26	24	17	3.0	13	1.0	.10
25	27	25	50	33	28	59	41	18	3.0	4.8	.82	2.1
26	24	166	32	30	27	30	23	15	2.8	2.8	.38	2.7
27	23	102	25	28	22	26	57	12	3.7	2.3	.36	1.2
28	23	41	23	27	22	27	80	12	3.7	1.7	.18	.72
29	23	35	22	27	22	150	45	10	2.9	1.4	.05	.63
30	23	31	22	24	---	56	43	9.8	2.2	1.2	.18	.55
31	22	---	22	25	---	53	---	12	---	1.2	.00	---
TOTAL	1450	1359	1013	1200	730	1185	980	611.8	213.0	107.78	22.40	9.01
MEAN	46.8	45.3	32.7	38.7	25.2	38.2	32.7	19.7	7.10	3.48	.72	.30
MAX	228	166	117	157	37	150	80	50	27	31	3.2	2.7
MIN	21	22	22	20	21	16	20	9.8	2.2	.63	.00	.00
CFSM	2.53	2.45	1.77	2.09	1.36	2.07	1.77	1.07	.38	.19	.04	.02
IN.	2.92	2.73	2.04	2.41	1.47	2.38	1.97	1.23	.43	.22	.05	.02

CAL YR 1979 TOTAL 15261.70 MEAN 41.8 MAX 1310 MIN 4.9 CFSM 2.26 IN 30.69
WTR YR 1980 TOTAL 8880.99 MEAN 24.3 MAX 228 MIN .00 CFSM 1.31 IN 17.86

01661475 POTOMAC RIVER AT PINEY POINT, MD

LOCATION.--Lat 38°08'02", long 76°31'56", St. Marys County, Hydrologic Unit 02070011, in metal house near end of wooden pier on left bank on Stewart Petroleum property, at river mile 15.5 (24.9 km).

PERIOD OF RECORD.--October 1979 to September 1980.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1979 to September 1980.
pH UNITS: October 1979 to September 1980.
WATER TEMPERATURE: October 1979 to September 1980.
DISSOLVED OXYGEN: October 1979 to September 1980

INSTRUMENTATION.--Water-quality monitor since October 1979.

REMARKS.--Interruptions in record due to instrument malfunctions and pump failures.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	16800	15900	16300	17000	15200	15900	17200	16800	17100
2	---	---	---	17500	16400	16800	15800	14100	14600	17200	14000	15900
3	---	---	---	17200	15700	16300	17300	15400	16300	17000	14400	15600
4	---	---	---	18500	16300	17400	17300	15500	16500	16900	16000	16700
5	---	---	---	18600	16600	17900	16400	13500	14900	16900	16200	16600
6	---	---	---	18100	14500	16500	16600	13700	15000	16900	15800	16400
7	---	---	---	16600	14200	15000	17400	14900	15800	16200	15600	16000
8	---	---	---	17200	14300	15700	16300	13900	14900	16000	12500	14500
9	---	---	---	16800	13800	14700	17000	14300	15900	16500	12800	15200
10	---	---	---	15800	13900	14800	17000	15500	16200	16600	13300	15000
11	---	---	---	16300	13700	14900	16800	12900	15500	15200	12900	13700
12	---	---	---	18000	15200	17200	16700	13100	14000	15800	13400	13900
13	---	---	---	18200	17000	17500	14100	12700	13500	16500	12600	14800
14	---	---	---	18100	14500	16800	17700	13700	15500	16200	12100	14200
15	---	---	---	15000	11900	13700	18000	15600	17400	15600	14500	15000
16	---	---	---	13300	10300	11800	17800	12200	15900	15900	13400	14500
17	---	---	---	17000	11400	12600	16800	12600	15800	16000	15000	15600
18	---	---	---	17200	12500	14200	18300	14700	16700	15300	12800	13800
19	---	---	---	18100	12100	15300	18100	15800	16500	16100	12900	14000
20	---	---	---	17500	11600	15600	17900	16200	17300	15100	11900	13300
21	---	---	---	16900	12800	15400	17700	17300	17500	15800	11900	13900
22	---	---	---	15700	11600	13300	17700	17100	17500	15400	11800	13200
23	---	---	---	13900	11400	12500	17700	16500	17300	14700	11900	13100
24	---	---	---	13800	12500	13600	17700	16200	16900	16000	10600	14100
25	---	---	---	15000	13800	14400	17100	16700	16900	14600	10500	12500
26	18100	14900	16500	15700	14700	15400	16700	16100	16300	14900	11500	13200
27	18400	15200	16300	16200	14100	15000	17200	16000	16300	15400	10000	13400
28	16800	14600	15900	15600	14800	15100	17500	15700	16500	14700	10200	11900
29	16300	14500	15100	17200	13800	15200	17800	14100	16300	14600	10700	12500
30	18800	14900	17000	16700	15600	16100	17800	14300	16800	16400	11900	13700
31	17100	15800	16300	---	---	---	17300	15600	16800	17300	13200	15400
MONTH	18800	14500	16200	18600	10300	15200	18300	12200	16100	17300	10000	14500

01661475 POTOMAC RIVER AT PINEY POINT, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	20700	19300	20000	---	---	---	12400	9980	11400
2	---	---	---	20900	19800	20400	18400	14200	15100	13300	9960	11400
3	---	---	---	20700	18900	20200	16500	12300	14400	12000	9970	10400
4	---	---	---	20300	18000	20000	14800	12400	13400	10900	9960	10100
5	---	---	---	18600	16500	17100	17700	12600	14300	---	---	---
6	---	---	---	19300	17100	18000	18300	13100	16000	---	---	---
7	---	---	---	---	17500	---	18100	13900	15800	---	---	---
8	---	---	---	---	---	---	16700	15600	16100	---	---	---
9	---	---	---	---	---	---	16600	16300	16400	---	---	---
10	---	---	---	---	---	---	16500	14100	15700	---	---	---
11	---	---	---	---	---	---	17500	12400	15200	---	---	---
12	---	---	---	---	---	---	17200	12100	13500	---	---	---
13	---	---	---	---	---	---	18000	11400	14000	---	---	---
14	---	---	---	---	---	---	16500	12100	13700	---	---	---
15	---	---	---	---	---	---	14300	12400	13300	---	---	---
16	---	---	---	---	---	---	14400	11400	12400	---	---	---
17	---	---	---	---	---	---	17000	13200	15100	---	---	---
18	---	---	---	---	---	---	16400	11400	13800	---	---	---
19	---	---	---	21100	19600	20500	15500	10400	12000	---	---	---
20	---	---	---	20500	18400	19500	12700	9980	10900	---	---	---
21	---	---	---	19700	18200	19200	13900	10200	11500	---	---	---
22	19500	18400	18900	17900	16600	17000	11600	9960	10300	---	---	---
23	20000	17800	19100	19500	16600	17700	14400	10300	12500	---	---	---
24	20100	17500	19000	20700	13500	17500	13300	10200	11600	---	---	---
25	20500	17700	19400	17700	13100	14600	12800	11600	12200	---	---	---
26	20400	18800	19600	---	---	---	14300	10700	12700	---	---	---
27	19700	18000	18600	---	---	---	14100	11200	12100	---	---	---
28	20500	17700	19200	---	---	---	12800	11300	12200	13800	9960	10300
29	20100	18300	19100	---	---	---	13900	10500	11400	15400	9960	11000
30	---	---	---	---	---	---	12900	11000	11800	13100	10800	12200
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	20500	17500	19100	21100	13100	18600	18400	9960	13400	15400	9960	11000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	19900	18300	18900	---	---	---	---	---	---
2	---	---	---	19200	17600	18600	---	---	---	---	---	---
3	---	---	---	18700	16800	17500	---	---	---	---	---	---
4	---	---	---	18900	17100	17600	19700	19000	19300	---	---	---
5	---	---	---	19900	16500	17800	19800	19400	19600	---	---	---
6	---	---	---	20700	16900	18400	19800	18900	19300	---	---	---
7	---	---	---	20200	18300	19300	21600	18800	19700	---	---	---
8	---	---	---	19200	17700	18100	20000	18400	18900	---	---	---
9	---	---	---	19900	17700	18300	20100	19200	19600	---	---	---
10	17400	---	---	19800	17800	18700	20600	18900	19500	25600	24200	25100
11	18200	16300	17200	20600	18500	19200	20500	19200	19600	26700	24000	25000
12	18100	16200	17300	20900	18600	19400	19600	18800	19200	25600	24800	25100
13	18300	16300	16900	21300	18800	20200	21400	18700	19600	---	---	---
14	18700	17000	17500	20700	18900	19700	---	---	---	---	---	---
15	18100	16500	17400	19600	18400	19200	---	---	---	---	---	---
16	18900	17300	18100	19800	19100	19400	---	---	---	---	---	---
17	19300	17500	18400	19100	17600	18300	21900	17400	20500	28000	24800	27200
18	19200	17900	18400	20900	17800	18500	19100	16700	18500	28100	26400	27000
19	18300	17800	18100	20500	18100	19100	20800	16500	18600	28200	24800	27100
20	18300	17900	18200	19000	18300	18600	23000	16500	20600	26200	25400	25900
21	19100	17500	18000	19500	18200	18600	21900	19800	20600	28300	24800	26400
22	18600	17600	18000	20800	18000	18600	22500	19700	20700	28500	24800	26600
23	18700	18100	18400	18900	17700	18100	22100	19500	20600	29000	24200	26400
24	18700	18100	18400	20500	17900	19100	22200	20100	21300	29500	27700	28600
25	18600	17900	18300	20200	17600	18800	22000	17300	19600	27800	24600	25800
26	19000	18300	18600	19900	18800	19200	22500	19200	20600	26500	24200	25200
27	19200	18200	18700	19800	19100	19400	21800	19000	20300	27400	24300	25700
28	19100	18000	18400	20200	19600	19900	20900	17400	20200	28000	23800	25400
29	18700	17900	18300	20400	19600	20000	21700	19900	20300	27300	23600	25700
30	18600	17000	17900	21200	20000	20500	22400	20900	21300	26400	25300	25700
31	---	---	---	21200	19900	20400	22000	21300	21500	---	---	---
MONTH	19300	16200	18000	21300	16500	18900	23000	16500	20000	29500	23600	26100

01661475 POTOMAC RIVER AT PINEY POINT, MD--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.5	7.5	8.1	8.5	8.3	8.4	8.4	8.1	8.2	8.6	8.4	8.5
2	---	---	---	8.5	8.3	8.4	8.4	8.2	8.3	8.7	8.4	8.5
3	---	---	---	8.4	8.1	8.3	8.3	8.1	8.2	8.7	8.5	8.6
4	---	---	---	8.3	8.1	8.2	8.4	8.1	8.2	8.6	8.4	8.5
5	---	---	---	8.3	8.0	8.1	8.5	8.2	8.4	8.5	8.4	8.5
6	---	---	---	8.5	8.1	8.3	8.4	8.2	8.3	8.6	8.4	8.5
7	---	---	---	8.8	8.4	8.6	8.4	8.1	8.3	8.6	8.5	8.5
8	---	---	---	8.4	8.1	8.3	8.5	8.3	8.4	8.7	8.5	8.6
9	8.4	7.9	8.0	8.4	8.2	8.3	8.4	8.2	8.3	8.6	8.5	8.6
10	8.4	7.8	8.0	8.4	8.2	8.3	8.5	8.2	8.4	8.8	8.5	8.6
11	8.6	7.7	8.1	8.3	7.9	8.1	8.6	8.4	8.5	8.8	8.6	8.7
12	8.6	8.4	8.5	8.0	7.8	7.9	8.8	8.4	8.6	8.7	8.5	8.7
13	8.5	7.9	8.2	8.0	7.8	7.9	8.8	8.6	8.7	8.8	8.5	8.6
14	8.0	7.7	7.9	7.9	7.7	7.9	8.8	8.1	8.4	8.8	8.5	8.6
15	8.4	7.7	7.9	8.0	7.9	7.9	8.5	8.1	8.3	8.6	8.5	8.6
16	8.4	8.0	8.2	8.1	7.9	8.0	8.8	8.2	8.5	8.6	8.5	8.6
17	8.9	7.8	8.3	8.1	7.9	8.0	8.8	8.4	8.5	8.7	8.5	8.6
18	8.8	8.3	8.6	8.2	7.9	8.0	8.5	8.2	8.3	8.7	8.5	8.7
19	8.8	8.1	8.5	8.3	7.9	8.1	8.5	8.2	8.4	8.7	8.4	8.6
20	8.8	8.0	8.6	8.5	8.0	8.2	8.4	8.2	8.3	8.6	8.4	8.5
21	9.0	8.6	8.8	8.5	8.0	8.4	8.4	8.2	8.3	8.6	8.4	8.5
22	9.2	8.5	8.9	8.9	8.4	8.6	8.4	8.2	8.3	8.6	8.5	8.5
23	9.0	8.7	8.9	8.9	8.6	8.8	8.6	8.2	8.4	8.5	8.4	8.5
24	8.7	7.8	8.3	8.8	8.6	8.7	8.7	8.3	8.5	8.4	8.3	8.4
25	8.1	7.8	7.9	8.8	8.5	8.7	8.7	8.5	8.6	8.5	8.4	8.4
26	8.4	7.8	8.1	8.7	8.4	8.5	8.7	8.4	8.6	8.5	8.4	8.4
27	8.3	7.9	8.1	8.5	8.4	8.5	8.7	8.4	8.6	8.5	8.4	8.5
28	8.4	8.1	8.2	8.5	8.4	8.5	8.7	8.4	8.5	8.6	8.5	8.5
29	8.4	8.1	8.3	8.4	8.1	8.2	8.7	8.5	8.6	8.6	8.4	8.5
30	8.6	8.1	8.3	8.3	8.0	8.1	8.7	8.3	8.5	8.5	8.4	8.4
31	8.6	8.3	8.4	---	---	---	8.6	8.4	8.5	8.4	8.3	8.4
MONTH	9.2	7.5	8.3	8.9	7.7	8.3	8.8	8.1	8.4	8.8	8.3	8.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	8.4	8.3	8.4	---	---	---	9.2	8.9	9.0
2	---	---	---	8.4	8.3	8.4	8.7	8.5	8.7	9.4	8.9	9.1
3	---	---	---	8.5	8.2	8.4	8.8	8.6	8.7	9.5	9.2	9.3
4	---	---	---	8.4	8.4	8.4	8.7	8.6	8.7	9.6	9.3	9.4
5	---	---	---	8.5	8.4	8.5	8.6	8.2	8.4	---	---	---
6	---	---	---	8.4	8.3	8.4	8.5	8.3	8.4	---	---	---
7	---	---	---	8.4	8.4	8.4	8.5	8.3	8.4	---	---	---
8	---	---	---	---	---	---	8.6	8.5	8.6	---	---	---
9	---	---	---	---	---	---	8.6	8.5	8.6	---	---	---
10	---	---	---	---	---	---	8.6	8.5	8.6	---	---	---
11	---	---	---	---	---	---	8.7	8.2	8.6	---	---	---
12	---	---	---	---	---	---	8.7	8.3	8.6	---	---	---
13	---	---	---	---	---	---	8.7	8.3	8.5	---	---	---
14	---	---	---	---	---	---	8.6	8.2	8.5	---	---	---
15	---	---	---	---	---	---	8.6	8.5	8.6	---	---	---
16	---	---	---	---	---	---	8.5	8.1	8.4	---	---	---
17	---	---	---	---	---	---	8.6	8.0	8.3	---	---	---
18	---	---	---	---	---	---	8.9	8.3	8.5	---	---	---
19	---	---	---	8.4	8.3	8.4	9.1	8.6	8.9	---	---	---
20	---	---	---	8.5	8.3	8.4	9.2	8.8	9.0	---	---	---
21	---	---	---	8.4	8.3	8.4	9.1	8.8	9.0	---	---	---
22	---	---	---	8.3	8.1	8.2	9.1	9.0	9.0	---	---	---
23	8.5	8.4	8.5	8.4	8.2	8.3	9.3	8.8	9.0	---	---	---
24	8.5	8.4	8.5	8.7	8.3	8.5	9.4	9.1	9.3	---	---	---
25	8.5	8.4	8.4	8.7	8.4	8.6	9.4	9.1	9.3	---	---	---
26	8.5	8.3	8.4	---	---	---	9.4	9.0	9.2	---	---	---
27	8.4	8.3	8.4	---	---	---	9.4	8.9	9.2	---	---	---
28	8.4	8.3	8.4	---	---	---	9.3	9.1	9.2	9.0	8.7	8.8
29	8.4	8.4	8.4	---	---	---	9.3	8.9	9.1	9.1	8.6	8.8
30	---	---	---	---	---	---	9.3	9.0	9.2	8.9	8.6	8.8
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	8.5	8.3	8.4	8.7	8.1	8.4	9.4	8.0	8.8	9.6	8.6	9.0

01661475 POTOMAC RIVER AT PINEY POINT, MD--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	8.8	7.6	8.1	---	---	---	---	---	---
2	---	---	---	8.6	8.2	8.4	---	---	---	---	---	---
3	---	---	---	8.7	8.0	8.5	---	---	---	8.3	8.3	8.3
4	---	---	---	8.4	7.9	8.2	8.2	7.9	8.1	8.4	8.0	8.2
5	---	---	---	8.5	7.8	8.3	8.2	7.8	8.0	8.4	8.0	8.3
6	---	---	---	8.6	7.5	8.0	8.2	7.7	8.0	8.4	8.0	8.2
7	---	---	---	8.4	7.6	8.0	8.2	7.4	8.0	8.4	7.8	8.1
8	---	---	---	8.3	7.8	8.1	8.4	7.9	8.2	8.3	7.8	8.0
9	---	---	---	8.2	7.4	7.8	8.3	7.9	8.1	8.4	8.1	8.3
10	---	---	---	8.0	7.3	7.7	8.5	7.5	8.2	8.4	8.0	8.2
11	8.5	8.0	8.3	8.4	7.4	7.9	8.5	7.8	8.1	8.3	8.0	8.1
12	8.9	7.8	8.3	8.5	7.5	8.0	8.4	8.1	8.2	8.2	8.0	8.1
13	8.9	7.9	8.6	8.4	7.3	7.9	8.2	7.4	7.8	---	---	---
14	8.8	8.2	8.6	8.4	7.7	8.1	---	---	---	---	---	---
15	8.9	8.5	8.7	8.8	8.2	8.5	---	---	---	---	---	---
16	8.6	7.8	8.3	8.8	8.5	8.6	---	---	---	---	---	---
17	8.6	7.7	8.1	8.8	8.6	8.7	8.4	7.4	7.9	8.3	8.0	8.2
18	8.8	7.9	8.4	8.6	7.9	8.4	8.4	8.0	8.2	8.2	8.0	8.1
19	8.8	8.6	8.7	8.4	7.9	8.2	8.3	7.8	8.1	8.4	7.7	8.0
20	8.8	8.4	8.7	8.5	8.3	8.4	8.0	7.1	7.5	8.3	8.1	8.2
21	8.3	7.8	8.1	8.5	8.1	8.3	8.1	7.4	7.7	8.4	7.9	8.2
22	8.6	8.1	8.3	8.5	7.8	8.3	8.0	7.3	7.7	8.2	8.0	8.1
23	8.6	8.4	8.5	8.4	8.1	8.2	8.1	7.7	7.9	8.4	7.5	8.1
24	8.7	8.3	8.5	8.3	7.8	8.1	8.3	7.5	7.8	8.0	7.5	7.8
25	8.7	8.5	8.5	8.3	7.9	8.1	8.5	7.8	8.1	8.2	7.9	8.0
26	8.7	8.3	8.4	8.4	8.0	8.2	8.4	7.9	8.2	8.1	7.8	7.9
27	8.4	7.8	8.2	8.4	8.0	8.2	8.5	7.8	8.2	8.2	7.7	7.9
28	8.4	7.8	8.3	8.4	8.1	8.2	8.5	8.1	8.4	8.2	7.7	7.9
29	8.5	8.1	8.3	8.3	7.9	8.1	8.5	8.0	8.3	8.1	7.5	7.9
30	8.6	8.0	8.3	8.2	7.8	7.9	8.4	8.0	8.3	8.0	7.8	7.9
31	---	---	---	8.1	7.8	7.9	8.4	8.1	8.3	---	---	---
MONTH	8.9	7.7	8.4	8.8	7.3	8.2	8.5	7.1	8.1	8.4	7.5	8.1

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.0	21.5	21.5	15.5	14.5	15.0	10.5	9.0	10.0	6.5	6.0	6.0
2	21.5	21.5	21.5	15.5	15.0	15.5	9.5	7.5	8.5	6.0	5.0	5.5
3	---	---	---	15.5	13.5	14.5	10.0	7.0	8.5	6.0	5.0	5.5
4	---	---	---	15.0	13.5	14.0	9.5	8.0	8.5	6.0	5.0	5.5
5	---	---	---	15.0	13.5	14.0	8.5	7.5	8.5	5.5	3.0	5.0
6	---	---	---	14.5	13.0	14.0	9.0	8.0	8.5	5.0	3.0	4.0
7	---	---	---	14.0	13.0	13.5	9.5	8.5	9.0	4.5	4.0	4.5
8	---	---	---	14.0	13.0	13.5	9.0	7.5	8.5	4.5	3.5	4.0
9	19.5	18.5	19.0	14.0	13.0	13.5	9.0	7.0	8.0	4.5	3.5	4.0
10	18.5	16.5	17.5	14.0	13.5	14.0	9.0	7.5	8.0	4.5	3.5	4.0
11	17.5	16.0	17.0	14.0	13.0	13.5	9.0	7.0	8.0	4.5	3.0	4.0
12	16.5	16.5	16.5	13.5	13.0	13.5	9.0	8.0	8.5	4.5	4.0	4.5
13	17.0	15.5	16.0	13.0	13.0	13.0	9.0	8.5	9.0	4.5	3.5	4.0
14	16.0	15.0	15.5	13.0	11.5	12.5	9.0	7.5	8.0	4.5	3.5	4.0
15	17.0	15.0	16.0	12.0	10.5	11.5	8.5	7.5	8.0	5.0	4.5	5.0
16	16.0	15.0	15.5	11.5	10.0	11.0	8.5	7.0	8.0	5.0	4.0	4.5
17	18.0	15.5	16.5	12.0	10.5	11.0	8.0	4.5	6.5	4.5	4.0	4.5
18	18.0	16.5	17.0	12.0	11.0	11.5	7.5	4.5	6.0	4.5	4.5	4.5
19	18.0	16.5	17.0	12.5	11.0	12.0	7.0	6.0	6.0	5.0	4.5	4.5
20	18.0	17.0	17.5	13.0	11.0	12.0	7.0	6.0	6.5	5.5	4.0	5.0
21	19.5	17.5	18.5	13.5	11.5	12.5	6.5	5.5	6.0	5.0	4.0	4.5
22	21.0	18.5	19.5	13.0	11.5	12.5	6.5	5.5	6.0	4.5	4.0	4.5
23	19.5	18.5	19.0	13.5	12.0	12.5	6.5	6.5	6.5	5.0	4.0	4.5
24	18.5	15.5	17.0	13.5	13.0	13.5	7.0	5.5	6.5	4.0	3.5	3.5
25	16.0	15.0	15.5	14.0	13.0	13.5	7.5	7.0	7.0	4.5	3.5	4.0
26	16.5	14.5	15.0	14.0	13.5	13.5	7.5	6.5	7.0	5.0	3.5	4.5
27	15.5	13.0	14.0	14.0	13.0	13.5	6.5	6.0	6.0	4.5	3.5	4.0
28	15.0	14.0	14.5	13.0	12.5	13.0	6.0	5.0	5.5	4.5	3.5	4.0
29	15.5	14.0	14.5	12.0	10.0	11.0	6.5	5.0	5.5	4.5	3.5	4.0
30	15.5	14.5	15.0	11.0	9.5	10.0	6.5	5.5	6.0	3.5	2.0	3.0
31	15.5	14.0	14.5	---	---	---	6.5	5.0	6.0	3.5	2.0	3.0
MONTH	22.0	13.0	17.0	15.5	9.5	13.0	10.5	4.5	7.5	6.5	2.0	4.5

01661475 POTOMAC RIVER AT PINEY POINT, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	2.0	1.0	1.5	---	---	---	15.0	14.5	15.0
2	---	---	---	2.0	.0	1.0	10.0	7.5	9.0	16.5	14.5	15.5
3	---	---	---	2.5	.0	1.0	11.0	8.5	9.5	18.0	15.0	16.5
4	---	---	---	2.0	1.0	1.5	11.5	10.0	11.0	19.0	17.0	17.5
5	---	---	---	2.5	1.5	2.0	10.5	8.5	9.5	---	---	---
6	---	---	---	3.5	2.0	2.5	10.0	8.0	9.5	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	11.5	10.0	11.0	---	---	---
9	---	---	---	---	---	---	12.0	11.0	11.5	---	---	---
10	---	---	---	---	---	---	13.5	11.0	12.0	---	---	---
11	---	---	---	---	---	---	13.5	10.0	12.5	---	---	---
12	---	---	---	---	---	---	14.0	10.5	13.0	---	---	---
13	---	---	---	---	---	---	14.0	10.5	12.5	---	---	---
14	---	---	---	---	---	---	14.0	11.5	13.0	---	---	---
15	---	---	---	---	---	---	13.5	13.0	13.0	---	---	---
16	---	---	---	---	---	---	13.0	11.0	12.0	---	---	---
17	---	---	---	---	---	---	12.5	10.0	11.0	---	---	---
18	---	---	---	---	---	---	13.5	10.5	11.5	---	---	---
19	---	---	---	6.0	4.5	5.5	15.5	12.0	13.0	---	---	---
20	---	---	---	7.0	5.5	6.0	15.0	12.5	14.0	---	---	---
21	---	---	---	7.5	6.5	7.0	15.0	14.0	14.5	---	---	---
22	3.5	3.0	3.5	8.0	7.0	7.5	16.5	14.0	15.0	---	---	---
23	4.5	2.5	3.5	8.5	6.5	7.5	18.5	14.0	15.5	---	---	---
24	5.5	3.0	4.0	8.0	6.5	7.5	17.5	15.5	16.5	---	---	---
25	5.5	3.0	4.0	8.5	8.0	8.0	18.0	15.5	16.5	---	---	---
26	3.5	2.0	3.0	---	---	---	16.0	14.5	15.0	---	---	---
27	3.0	2.0	2.5	---	---	---	15.5	14.5	15.0	21.0	20.5	21.0
28	2.5	2.0	2.5	---	---	---	15.5	14.5	15.0	23.5	20.0	21.5
29	2.5	1.5	2.0	---	---	---	17.0	14.5	15.5	24.5	21.0	22.5
30	---	---	---	---	---	---	16.0	15.0	15.5	22.0	21.0	21.5
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	5.5	1.5	3.0	8.5	.0	4.5	18.5	7.5	13.0	24.5	14.5	19.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	26.0	23.5	24.0	---	---	---	---	---	---
2	---	---	---	26.5	23.5	25.0	---	---	---	---	---	---
3	---	---	---	26.0	24.5	25.5	---	---	---	27.5	27.5	27.5
4	---	---	---	27.0	25.0	26.0	29.5	28.0	28.5	28.5	27.0	27.5
5	---	---	---	27.5	25.0	26.0	29.5	28.0	28.5	27.5	24.5	27.0
6	---	---	---	27.0	25.0	26.0	30.0	28.5	29.0	28.5	24.5	27.0
7	---	---	---	26.5	24.5	25.5	30.0	27.5	29.0	27.5	25.0	27.0
8	---	---	---	25.5	24.5	25.0	31.0	28.5	29.5	28.0	24.0	26.0
9	---	---	---	26.5	23.5	24.5	31.5	28.5	29.5	27.0	24.0	26.0
10	---	---	---	27.0	24.5	25.5	31.5	28.5	29.5	26.0	25.0	26.0
11	23.0	20.5	21.5	27.5	24.5	26.0	31.0	28.5	29.5	26.0	23.5	25.0
12	23.0	21.0	22.0	28.5	25.0	26.0	30.5	29.0	29.5	26.0	24.5	25.0
13	23.0	21.5	22.0	26.5	24.5	25.5	29.5	28.0	28.5	---	---	---
14	24.0	22.0	22.5	27.0	24.0	25.5	---	---	---	---	---	---
15	25.0	22.0	23.0	28.0	25.5	26.5	---	---	---	---	---	---
16	24.5	21.0	23.0	28.5	26.5	27.5	---	---	---	---	---	---
17	23.5	21.0	22.0	30.5	28.0	29.0	28.0	24.0	26.5	25.5	24.5	25.0
18	23.0	21.5	22.5	30.0	27.5	28.5	26.5	24.0	26.0	25.5	25.0	25.5
19	24.0	21.0	23.0	30.0	27.5	28.5	26.5	24.0	25.5	26.0	24.5	25.0
20	23.5	21.0	23.0	30.5	28.5	29.5	26.5	24.5	25.0	25.0	24.5	25.0
21	24.0	21.0	22.5	31.5	29.0	30.0	26.5	24.0	25.0	26.0	24.5	25.0
22	24.0	22.5	23.0	29.5	27.5	29.0	26.0	24.0	25.5	26.0	24.0	25.5
23	24.5	23.0	24.0	28.5	27.5	28.0	26.0	24.0	25.5	26.5	24.0	25.0
24	25.0	23.5	24.0	28.0	27.0	27.5	26.5	24.0	25.5	25.0	24.5	24.5
25	25.0	24.0	24.5	28.5	26.5	27.5	27.5	24.0	26.0	25.0	24.0	24.5
26	24.5	24.0	24.0	29.0	27.0	28.0	27.0	24.0	26.0	24.5	20.0	23.5
27	26.0	23.5	24.0	28.5	25.0	27.5	27.0	24.0	26.0	23.5	20.0	21.5
28	27.0	24.0	25.5	28.0	26.5	27.5	27.5	24.0	26.5	24.0	20.0	21.5
29	27.0	24.0	25.5	28.5	27.0	27.5	28.0	24.5	26.5	23.5	20.0	22.0
30	26.0	24.5	25.5	28.5	26.5	27.5	28.0	25.0	26.5	21.0	20.5	20.5
31	---	---	---	28.5	27.0	27.5	27.5	25.0	26.5	---	---	---
MONTH	27.0	20.5	23.5	31.5	23.5	27.0	31.5	24.0	27.0	28.5	20.0	25.0

01661475 POTOMAC RIVER AT PINEY POINT, MD--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	11.0	9.7	10.4	9.7	8.3	9.0	13.5	12.2	12.8
2	---	---	---	10.7	9.4	10.0	10.8	9.8	10.5	14.0	12.2	13.0
3	---	---	---	9.8	8.8	9.2	10.7	9.0	10.0	13.9	12.6	13.1
4	---	---	---	9.5	8.3	8.9	10.2	9.2	9.8	13.2	12.5	12.9
5	---	---	---	9.6	8.3	8.8	10.9	9.4	10.1	12.7	12.3	12.6
6	---	---	---	10.8	8.6	9.5	10.6	9.4	10.2	13.3	12.3	12.8
7	---	---	---	11.5	9.5	10.5	10.7	9.8	10.1	13.0	12.6	12.8
8	---	---	---	10.6	8.6	9.3	10.8	9.8	10.4	13.8	12.6	13.1
9	9.1	7.1	7.5	11.0	10.0	10.5	10.5	9.9	10.3	13.4	12.5	12.9
10	8.1	6.6	7.6	10.4	9.7	10.2	10.7	10.0	10.4	14.3	12.2	13.3
11	10.9	7.3	9.1	---	---	---	10.9	10.2	10.6	14.2	13.4	13.9
12	11.0	9.8	10.6	---	---	---	11.1	10.1	10.7	13.9	12.6	13.5
13	10.4	8.9	9.5	---	---	---	13.0	10.2	11.5	14.1	12.4	13.2
14	9.2	7.5	8.6	---	---	---	12.2	9.1	10.9	13.9	12.7	13.3
15	10.6	8.0	9.0	---	---	---	11.6	10.0	10.9	13.4	12.4	12.9
16	11.0	9.3	10.0	9.4	8.5	8.9	14.2	10.3	12.1	13.5	12.7	13.1
17	13.3	8.6	10.6	9.9	8.1	9.0	13.7	10.5	11.0	13.6	12.7	13.2
18	12.9	10.3	11.4	11.0	8.7	9.7	11.9	10.0	10.8	13.7	12.7	13.3
19	12.8	9.6	11.1	9.7	7.8	9.0	11.9	10.2	11.2	13.3	11.8	12.8
20	12.7	9.1	11.3	10.7	8.4	9.4	11.5	10.4	11.0	13.2	11.9	12.7
21	13.0	10.5	11.8	10.9	8.4	10.0	11.8	10.6	11.1	13.3	12.0	12.6
22	13.8	9.9	12.5	13.4	11.1	12.2	12.5	11.0	11.6	12.8	12.4	12.5
23	12.4	9.6	11.3	13.0	11.5	12.3	13.5	11.4	12.2	12.8	12.1	12.4
24	9.9	7.0	9.0	12.5	11.0	12.3	14.4	11.1	12.9	12.7	12.0	12.3
25	9.9	7.9	8.6	12.7	11.4	12.1	13.4	12.6	13.0	13.0	12.2	12.6
26	10.8	7.6	9.0	11.7	10.2	10.8	12.5	11.4	12.0	13.4	12.1	12.8
27	10.5	8.4	9.4	10.9	10.1	10.5	12.7	11.0	11.8	13.6	12.3	13.0
28	10.9	9.0	9.8	10.5	10.0	10.2	13.0	11.5	12.2	13.8	12.9	13.4
29	10.9	9.2	10.1	10.0	8.1	9.4	13.5	12.0	12.6	13.5	12.7	13.2
30	11.8	8.4	9.8	9.9	8.5	9.3	14.1	11.6	13.0	13.3	12.6	12.9
31	11.4	9.6	10.5	---	---	---	13.5	12.1	12.8	13.0	11.8	12.7
MONTH	13.8	6.6	9.9	13.4	7.8	10.1	14.4	8.3	11.2	14.3	11.8	13.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	14.0	13.3	13.6	---	---	---	---	---	---
2	---	---	---	14.1	13.3	13.7	13.3	12.2	12.6	---	---	---
3	---	---	---	14.1	13.6	13.9	12.9	12.0	12.4	---	---	---
4	---	---	---	14.1	13.8	14.0	12.3	11.3	12.0	---	---	---
5	---	---	---	14.1	13.6	13.9	11.3	10.8	11.1	---	---	---
6	---	---	---	13.8	13.4	13.6	12.1	10.8	11.4	---	---	---
7	---	---	---	---	---	---	12.0	11.3	11.7	---	---	---
8	---	---	---	---	---	---	12.5	11.6	12.1	---	---	---
9	---	---	---	---	---	---	12.1	11.2	11.7	---	---	---
10	---	---	---	---	---	---	12.5	11.2	11.9	---	---	---
11	---	---	---	---	---	---	13.0	10.1	11.9	---	---	---
12	---	---	---	---	---	---	12.5	10.4	11.7	---	---	---
13	---	---	---	---	---	---	12.7	10.6	11.3	---	---	---
14	---	---	---	---	---	---	11.7	10.1	11.1	---	---	---
15	---	---	---	---	---	---	11.4	10.6	11.0	---	---	---
16	---	---	---	---	---	---	11.2	9.9	10.5	---	---	---
17	---	---	---	---	---	---	12.7	9.5	10.7	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	14.6	14.3	14.5	---	---	---	---	---	---	---	---	---
23	14.8	14.0	14.5	---	---	---	---	---	---	---	---	---
24	14.6	14.1	14.4	---	---	---	---	---	---	---	---	---
25	14.4	13.8	14.1	---	---	---	---	---	---	---	---	---
26	14.3	13.5	13.8	---	---	---	---	---	---	---	---	---
27	13.8	13.5	13.6	---	---	---	---	---	---	9.4	8.1	8.7
28	14.0	13.4	13.7	---	---	---	---	---	---	9.4	7.9	8.8
29	13.8	13.4	13.6	---	---	---	---	---	---	10.3	7.7	8.9
30	---	---	---	---	---	---	---	---	---	8.7	7.0	7.9
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	14.8	13.4	14.0	14.1	13.3	13.8	13.3	9.5	11.6	10.3	7.0	8.6

01661500 ST. MARYS RIVER AT GREAT MILLS, MD

LOCATION.--Lat 38°14'36", long 76°30'13", St. Marys County, Hydrologic Unit 02070011, on left bank at downstream side of bridge on State Highway 471 in Great Mills, 0.3 mi (0.5 km) downstream from Western Branch, and 12.0 mi (19.3 km) upstream from mouth.

DRAINAGE AREA.--24.0 mi² (62.2 km²).

PERIOD OF RECORD.--June 1946 to current year.

REVISED RECORDS.--WSP 1702: 1946, 1948-49, 1955, 1957-58.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 10 ft (3 m), from topographic map.

REMARKS.--Records excellent. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--34 years, 23.9 ft³/s (0.677 m³/s), 13.52 in/yr (343 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,950 ft³/s (225 m³/s) Aug. 20, 1969, gage height, 13.34 ft (4.066 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of contracted-opening measurement at gage height 12.08 ft (3.682 m); minimum, 0.2 ft³/s (0.006 m³/s) Sept. 7, 1966, gage height, 1.13 ft (0.344 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 408 ft³/s (11.6 m³/s) July 23, gage height 4.58 ft (1.396 m), no other peak above base of 400 ft³/s (11 m³/s); minimum, 1.7 ft³/s (0.048 m³/s) Sept. 2, 3, 4, 5, gage height, 1.27 ft (0.387 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	16	40	18	26	11	43	57	10	3.6	4.7	2.0
2	97	17	36	18	24	13	34	46	8.7	3.4	4.6	1.9
3	71	50	31	17	23	15	32	35	8.5	3.3	4.0	1.8
4	44	36	28	18	22	16	38	28	9.7	3.9	4.6	1.8
5	33	26	24	22	21	32	34	24	7.9	3.8	4.5	4.4
6	27	23	46	22	20	31	28	21	7.2	4.1	3.7	3.5
7	22	21	60	22	21	20	26	19	8.3	3.5	3.1	2.8
8	19	19	40	26	21	17	25	18	20	4.7	3.1	2.5
9	18	19	31	24	21	15	70	17	14	6.3	3.0	2.3
10	118	19	27	22	22	14	63	16	10	5.7	3.1	2.5
11	122	89	25	45	22	14	42	15	8.9	4.7	3.1	2.7
12	66	212	23	144	21	13	34	15	7.9	4.3	3.1	2.5
13	53	137	48	66	19	87	31	14	7.4	4.5	2.8	2.3
14	47	112	57	48	20	141	40	14	6.9	3.1	2.3	2.3
15	34	65	38	41	22	38	41	12	6.6	3.0	2.2	2.3
16	29	47	32	35	31	24	30	11	7.2	2.7	3.0	2.2
17	26	37	28	31	26	21	25	11	6.8	3.7	2.8	2.2
18	23	32	25	74	21	53	24	15	6.0	15	3.3	3.8
19	20	28	24	152	21	27	22	17	5.7	6.4	4.0	3.8
20	19	25	22	76	21	21	21	28	5.5	4.5	4.0	3.0
21	18	24	19	55	23	76	21	42	4.9	3.5	3.5	2.8
22	17	23	19	55	24	41	20	26	4.5	42	3.3	2.6
23	17	22	19	101	22	25	19	20	4.5	236	3.3	2.4
24	35	21	20	63	21	22	19	17	4.4	68	3.0	4.0
25	26	21	28	50	23	50	27	16	4.7	29	2.8	6.6
26	25	211	24	42	22	28	21	14	5.7	18	2.5	7.5
27	24	182	21	36	19	21	26	12	6.2	12	2.5	3.9
28	18	94	20	32	17	21	58	11	5.1	9.4	2.3	2.9
29	18	58	19	30	13	138	50	9.7	4.4	8.1	2.2	2.8
30	17	44	19	27	---	64	50	9.6	4.1	6.3	2.1	2.8
31	16	---	18	26	---	60	---	11	---	5.7	2.0	---
TOTAL	1238	1730	911	1438	629	1169	1014	621.3	221.7	532.2	98.5	90.9
MEAN	39.9	57.7	29.4	46.4	21.7	37.7	33.8	20.0	7.39	17.2	3.18	3.03
MAX	122	212	60	152	31	141	70	57	20	236	4.7	7.5
MIN	16	16	18	17	13	11	19	9.6	4.1	2.7	2.0	1.8
CFSM	1.66	2.40	1.23	1.93	.90	1.57	1.41	.83	.31	.72	.13	.13
IN.	1.92	2.68	1.41	2.23	.97	1.81	1.57	.96	.34	.82	.15	.14

CAL YR 1979 TOTAL 19294.3 MEAN 52.9 MAX 1320 MIN 5.0 CFSM 2.20 IN 29.90
WTR YR 1980 TOTAL 9693.6 MEAN 26.5 MAX 236 MIN 1.8 CFSM 1.10 IN 15.02

MONONGAHELA RIVER BASIN

03075500 YOUGHIOGHENY RIVER NEAR OAKLAND, MD

LOCATION.--Lat 39°25'19", long 79°25'32", Garrett County, Hydrologic Unit 05020006, on left bank 200 ft (61 m) downstream from Baltimore and Ohio Railroad bridge, 250 ft (76 m) downstream from Little Youghiogheny River, 1.2 mi (1.9 km) northwest of Oakland, and 1.5 mi (2.4 km) upstream from Dunkard Lick Run.

DRAINAGE AREA.--134 mi^2 (347 km^2).

PERIOD OF RECORD.--August 1941 to current year.

REVISED RECORDS.--WSP 1113: 1947(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,353.61 ft (717.380 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 1, 1946, nonrecording gage at bridge 200 ft (61 m) upstream at same datum.

REMARKS.--Records good. Town of Oakland diverted an average of 0.4 ft^3/s (0.011 m^3/s) for water supply. The diversion is returned above station as sewage. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--39 years, 297 ft^3/s (8.411 m^3/s), 30.10 in/yr (765 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft^3/s (334 m^3/s) Oct. 16, 1954, gage height, 12.16 ft (3.706 m); minimum daily, 2.5 ft^3/s (0.071 m^3/s) Oct. 4, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of 15.3 ft (4.66 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (56 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 10	0930	2420	68.5	5.80	1.768	Apr. 9	0800	4090	116	7.31	2.228
Feb. 23	0045	2670	75.6	6.05	1.844	Aug. 18	1730	*5140	146	8.12	2.475
Mar. 31	1945	2180	61.7	5.55	1.692						

Minimum discharge, 32 ft^3/s (0.91 m^3/s) Sept. 29, 30, gage height, 2.05 ft (0.625 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	145	213	218	94	304	1460	970	373	84	223	82
2	168	369	198	190	92	258	879	682	351	72	363	77
3	405	652	173	160	88	233	644	510	608	118	223	100
4	318	441	195	150	85	210	679	404	1230	127	173	94
5	498	347	151	140	82	657	585	335	585	84	167	520
6	856	290	184	130	78	1470	482	284	515	162	128	146
7	579	272	234	120	77	795	410	250	461	104	105	129
8	477	251	194	115	74	966	385	212	774	366	89	97
9	1350	215	162	110	72	972	3140	107	577	638	174	82
10	2320	269	152	110	69	656	1390	168	1080	297	519	77
11	1730	292	147	200	67	593	785	148	843	206	292	58
12	1200	251	147	520	62	442	588	144	593	203	999	62
13	1250	239	515	470	59	372	509	307	440	674	525	56
14	916	218	683	440	58	345	822	230	344	270	317	52
15	652	196	468	410	57	335	892	181	311	179	364	54
16	489	221	381	380	61	318	751	152	1330	131	1160	52
17	395	202	333	382	69	902	642	135	863	113	485	48
18	329	177	316	364	78	1760	541	188	536	123	3200	44
19	278	160	244	347	94	1070	458	163	398	87	3710	41
20	236	149	208	288	115	757	391	232	317	72	1770	37
21	202	138	180	251	285	727	339	890	254	68	879	37
22	176	129	167	230	1500	685	290	645	213	110	582	41
23	162	121	167	224	2150	555	255	448	176	188	411	42
24	161	124	174	160	1350	535	221	471	148	174	301	94
25	148	140	784	198	830	589	209	991	128	104	234	56
26	136	435	606	186	611	501	191	520	109	79	186	46
27	123	462	446	160	455	419	447	373	96	68	152	44
28	185	347	359	140	390	399	522	294	92	82	126	37
29	268	298	304	122	333	842	403	236	84	813	107	34
30	188	249	269	110	---	616	960	197	87	310	93	32
31	159	---	235	98	---	1360	---	210	---	186	87	---
TOTAL	16538	7799	8989	7123	9435	20647	20272	11157	13916	6292	18135	2459
MEAN	533	260	290	230	325	666	676	360	464	203	585	82.0
MAX	2320	652	784	520	2150	1760	3140	991	1330	813	3710	520
MIN	123	121	147	98	57	210	191	135	84	68	87	32
CFSM	3.98	1.94	2.16	1.72	2.43	4.97	5.05	2.69	3.46	1.52	4.37	.61
IN.	4.59	2.17	2.50	1.98	2.62	5.73	5.63	3.10	3.86	1.75	5.03	.68

CAL YR 1979 TOTAL 136827 MEAN 375 MAX 4080 MIN 36 CFSM 2.80 IN 37.98
WTR YR 1980 TOTAL 142762 MEAN 390 MAX 3710 MIN 32 CFSM 2.91 IN 39.63

03076000 DEEP CREEK RESERVOIR NEAR OAKLAND, MD

LOCATION.--Lat 39°30'34", long 79°23'28", Garrett County, Hydrologic Unit 05020006, on Deep Creek at dam, 1.8 mi (2.9 km) upstream from mouth and 7.0 mi (11.3 km) north of Oakland.

DRAINAGE AREA.--64.7 mi^2 (167.6 km^2).

PERIOD OF RECORD.--July 1925 to current year. Prior to October 1950, monthend contents published in WSP 1305, and October 1950 to September 1955, monthend contents published in WSP 1385.

GAGE.--Water-stage recorder at right end of spillway. Datum of gage is at mean sea level, unadjusted.

REMARKS.--Reservoir is formed by an earthfill dam completed January 1925, with storage beginning at that time. Usable capacity, 92,975 acre-ft (115 hm^3) between elevations 2,425 ft (739.1 m), top of intake to outlet tunnel, and 2,462 ft (750.4 m), crest of spillway. Dead storage, 13,085 acre-ft (16.1 hm^3). Figures given herein represent usable contents. Reservoir is used for hydroelectric power.

COOPERATION.--Elevations and capacity table furnished by Pennsylvania Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 93,258 acre-ft (115 hm^3) July 24, 25, 1949, elevation, 2,462.075 ft (750.440 m); minimum observed, 11,763 acre-ft (14.5 hm^3) Sept. 30, 1925, elevation, 2,433.45 ft (741.716 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 90,700 acre-ft (112 hm^3) May 26, elevation, 2,461.40 ft (750.235 m); minimum, 62,700 acre-ft (77.3 hm^3) Sept. 30, elevation, 2,453.50 ft (747.827 m).

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2455.8	70500	
Oct. 31	2456.8	73900	+3400
Nov. 30	2456.1	71500	-2400
Dec. 31	2456.2	71800	+300
CAL YR 1979			-6100
Jan. 31	2455.6	69800	-2000
Feb. 29	2455.4	69100	-700
Mar. 31	2459.0	81900	+12800
Apr. 30	2460.6	87800	+5900
May 31	2461.0	89300	+1500
June 30	2459.9	85200	-4100
July 31	2457.8	77500	-7700
Aug. 31	2456.6	73200	-4300
Sept. 30	2453.5	62700	-10500
WTR YR 1980			-7800

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD

LOCATION.--Lat 39°39'13", long 79°24'31", Garrett County, Hydrologic Unit 05020006, on left bank 0.7 mi (1.1 km) upstream from bridge on State Highway 42 at Friendsville, and 1.5 mi (2.4 km) upstream from Bear Creek.

DRAINAGE AREA.--295 mi² (764 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1898 to December 1904 and October 1940 to current year. October, November 1940 monthly discharge only, published in WSP 1305. September 1922 to September 1926 (gage heights only) in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: Drainage area at former site, 1898-1905, 1941(M), 1942, 1944-45, 1948-49, 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,487.33 ft (453.338 m) National Geodetic Vertical Datum of 1929. Aug. 17, 1898, to Dec. 31, 1904, and Sept. 1, 1922, to Sept. 30, 1926, nonrecording gages at bridge 0.7 mi (1.1 km) downstream at datum 16.24 ft (4.950 m) and 16.29 ft (4.965 m) lower, respectively.

REMARKS.--Water-discharge records good except those for winter periods which are fair. Low and medium flow regulated since July 1925 by Deep Creek Reservoir (see station 03076000). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years (water years 1899-1904, 1941-80), 644 ft³/s (18.24 m³/s), 29.65 in/yr (753 mm/yr), adjusted for storage since October 1940.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) Oct. 16, 1954, gage height, 8.99 ft (2.740 m), from rating curve extended above 5,800 ft³/s (164 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 8.2 ft³/s (0.23 m³/s) Sept. 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1898, 14.2 ft (4.33 m) Mar. 29, 1924, from floodmarks, site and datum then in use or 10.2 ft (3.11 m), present site and datum; discharge, about 15,600 ft³/s (440 m³/s), from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,010 ft³/s (170 m³/s) Aug. 18, gage height, 6.22 ft (1.896 m); minimum, 47 ft³/s (1.33 m³/s) Feb. 8, result of freezeup; minimum daily, 72 ft³/s (2.04 m³/s) Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	492	478	423	378	270	489	2870	1700	821	392	345	291
2	505	701	394	483	200	429	1680	1230	1020	337	414	357
3	874	1140	434	415	220	529	1190	807	1450	340	289	402
4	715	756	412	447	170	529	1150	644	2160	214	357	398
5	907	770	420	275	130	660	1070	686	1340	164	342	698
6	1480	760	435	309	120	2220	843	610	1090	147	316	506
7	1070	679	536	410	115	1320	795	558	861	411	281	308
8	1020	650	391	402	120	1440	727	508	1010	461	269	376
9	2200	607	333	400	95	1660	4120	468	1160	1120	183	377
10	3830	475	390	371	80	1140	2840	294	2330	626	468	367
11	3070	519	387	423	181	1010	1710	269	2020	528	468	357
12	2180	571	391	1280	207	767	1150	422	1420	239	1320	353
13	2190	538	463	759	212	660	839	554	1090	697	808	283
14	1560	526	1440	829	172	614	1830	555	630	594	597	155
15	1330	484	873	919	149	496	2390	466	495	522	531	239
16	1040	533	701	840	113	504	1590	420	2070	474	1180	316
17	885	402	708	737	115	1080	1490	246	1890	364	654	300
18	758	344	551	707	200	3150	1260	308	1280	403	3400	285
19	664	435	600	570	185	2090	777	534	1060	152	5280	288
20	430	427	544	489	172	1420	648	764	918	122	3110	155
21	356	414	484	545	267	1310	790	1870	518	332	1640	72
22	483	285	349	512	1670	1280	741	1490	341	351	1200	219
23	493	371	318	504	3450	987	668	1050	436	364	822	338
24	485	271	458	443	2340	999	624	708	440	403	583	392
25	479	278	1070	481	1550	1200	609	1440	469	319	579	328
26	460	932	1180	320	1140	999	364	878	404	129	553	312
27	279	1090	898	280	862	816	533	914	376	110	502	271
28	326	787	757	260	757	738	949	907	169	248	466	280
29	629	672	519	310	660	1370	753	695	160	915	441	255
30	580	582	463	290	---	1100	1210	700	298	586	363	273
31	529	---	533	380	---	2040	---	707	---	374	269	---
TOTAL	32299	17477	18355	15768	15922	35046	38210	23402	29726	12438	28030	9471
MEAN	1042	583	592	509	549	1131	1274	755	991	401	904	316
MAX	3830	1140	1440	1280	3450	3150	4120	1870	2330	1120	5280	698
MIN	279	271	318	260	80	429	364	246	160	110	183	72
(≠)	55.5	-40.3	4.9	-32.5	-12.2	208	99.3	24.4	-69.1	-125	-70.1	-176
MEAN♦	1098	543	597	476	537	1339	1373	779	922	276	834	140
CFSM♦	3.72	1.84	2.02	1.61	1.82	4.54	4.65	2.64	3.13	0.94	2.83	0.47
IN♦	4.29	2.05	2.33	1.86	1.96	5.23	5.19	3.04	3.49	1.08	3.26	0.52

CAL YR 1979 TOTAL 282267 MEAN 773 MAX 6820 MIN 81 MEAN♦ 765 CFSM♦ 2.59 IN♦ 35.20
WTR YR 1980 TOTAL 276144 MEAN 754 MAX 5280 MIN 72 MEAN♦ 743 CFSM♦ 2.52 IN♦ 34.18

≠ Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir furnished by Pennsylvania Electric Co.

♦ Adjusted for change in contents.

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT , 1979									
23...	1100	289	75	7.0	15.0	14.0	9.5	24	14
NOV									
14...	1015	387	70	6.9	3.0	6.0	11.8	23	18
DEC									
14...	1100	1350	82	7.1	1.0	4.0	13.7	26	3
JAN , 1980									
16...	1030	660	70	7.1	4.0	3.0	12.5	24	13
FEB									
15...	1230	79	81	6.5	4.0	2.0	--	27	22
APR									
09...	1045	5050	59	6.8	20.0	10.5	11.8	20	13
MAY									
08...	0830	361	54	6.2	7.5	10.5	10.9	23	17
JUN									
12...	0900	1100	55	6.3	10.0	11.5	10.7	20	15
AUG									
27...	1015	272	58	6.3	20.0	19.0	8.9	25	12
SEP									
09...	1000	141	64	6.8	20.0	18.5	9.3	--	--

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
OCT , 1979									
23...	.0	.0	6.8	1.6	1.8	18	.2	1.0	10
NOV									
14...	.0	.0	6.8	1.4	1.5	15	.1	1.0	5
DEC									
14...	.0	.0	8.0	1.4	2.5	20	.2	1.6	23
JAN , 1980									
16...	.0	.0	7.0	1.5	2.5	18	.2	1.0	11
FEB									
15...	.0	.0	7.5	1.9	2.1	14	.2	.9	5
APR									
09...	.1	5.0	6.2	1.0	1.3	12	.1	1.5	7
MAY									
08...	.5	25	6.4	1.6	1.8	14	.2	.8	6
JUN									
12...	.1	5.0	5.7	1.3	1.6	14	.2	.8	5
AUG									
27...	.1	5.0	6.9	1.8	1.7	13	.2	1.0	13
SEP									
09...	--	--	--	--	--	--	--	--	--

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT , 1979								
23...	18	2.9	.1	2.6	45	42	.06	35.1
NOV								
14...	15	3.0	.1	4.1	52	39	.07	54.3
DEC								
14...	14	4.4	.0	4.0	54	53	.07	197
JAN , 1980								
16...	13	4.3	.0	4.0	45	43	.06	80.2
FEB								
15...	22	3.3	.1	1.6	43	44	.06	9.17
APR								
09...	11	2.3	.1	2.6	46	33	.06	627
MAY								
08...	14	2.9	.1	3.6	53	38	.07	51.7
JUN								
12...	13	2.4	.0	4.3	50	36	.07	148
AUG								
27...	17	2.8	.1	3.5	54	45	.07	39.7
SEP								
09...	18	--	--	--	62	--	.08	23.6

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT , 1979						
23...	290	240	50	100	30	70
NOV						
14...	310	250	60	60	0	60
DEC						
14...	2100	2100	30	160	80	80
JAN , 1980						
16...	740	670	70	80	10	70
FEB						
15...	90	70	20	70	0	70
APR						
09...	16000	16000	120	580	480	100
MAY						
08...	70	10	60	40	10	30
JUN						
12...	970	930	40	90	50	40
AUG						
27...	500	450	50	240	60	180
SEP						
09...	330	210	120	180	30	150

DATE	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	COAL IN BOTTOM MATE- RIAL (GM/KG)
OCT , 1979				
23...	6	4.7	83	--
NOV				
14...	7	7.3	--	--
DEC				
14...	61	222	--	--
JAN , 1980				
16...	11	20	--	--
FEB				
15...	12	2.6	--	--
APR				
09...	530	7230	--	--
JUN				
12...	23	68	--	--
AUG				
27...	10	--	--	--
SEP				
09...	--	--	--	2.00

03076600 BEAR CREEK AT FRIENDSVILLE, MD

LOCATION.--Lat 39°39'22", long 79°23'41", Garrett County, Hydrologic Unit 05020006, on right bank 0.2 mi (0.3 km) downstream from bridge on Accident-Friendsville Road, 0.6 mi (1.0 km) downstream from South Branch Bear Creek, 0.8 mi (1.3 km) southeast of Friendsville, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--48.9 mi² (126.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,551.34 ft (472.848 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 89.1 ft³/s (2.523 m³/s), 24.74 in/yr (628 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,650 ft³/s (132 m³/s) Sept. 14, 1971, gage height, 9.6 ft (2.93 m), from floodmarks, from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.5 ft³/s (0.042 m³/s) Sept. 12, 1966, gage height, 0.42 ft (0.128 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1830	763	21.6	3.53	1.076	Apr. 9	0215	*1450	41.1	4.69	1.430
Nov. 26	1000	789	22.3	3.60	1.097	May 21	0515	801	22.7	3.62	1.103
Feb. 22	1730	907	25.7	3.81	1.161	June 10	0900	914	25.9	3.82	1.164
Mar. 18	0400	782	22.1	3.58	1.091	July 8	1615	893	25.3	3.79	1.155
Mar. 31	1500	707	20.0	3.41	1.039	Aug. 18	0615	900	25.5	3.80	1.158

Minimum discharge, 10 ft³/s (0.28 m³/s) Sept. 30, gage height, 0.95 ft (0.290 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	37	88	66	56	80	519	111	71	27	25	29
2	110	144	79	60	75	77	381	106	88	24	23	28
3	370	212	65	54	90	62	272	100	106	30	24	31
4	180	135	60	52	93	76	297	88	135	25	22	25
5	320	104	58	49	73	197	253	79	92	25	19	41
6	397	88	62	52	42	267	197	72	92	23	17	27
7	318	79	69	46	31	190	149	65	77	19	14	23
8	313	70	62	44	26	297	149	57	75	287	14	20
9	519	66	56	44	24	329	886	52	71	138	24	19
10	661	75	55	42	22	253	568	48	674	70	34	24
11	431	67	53	64	20	190	365	46	486	51	111	18
12	355	62	53	115	18	122	253	52	282	46	248	17
13	324	60	248	113	17	104	177	56	159	42	106	16
14	267	59	318	100	17	96	302	46	113	33	67	15
15	190	56	227	96	18	82	519	41	100	31	118	15
16	135	62	.52	88	19	100	414	38	287	30	118	15
17	108	56	120	87	20	350	313	36	149	24	82	14
18	87	54	111	87	21	661	239	47	118	22	648	13
19	75	51	84	83	22	420	162	75	94	20	629	13
20	66	49	72	76	27	329	130	115	77	18	414	12
21	58	47	64	71	197	297	108	636	65	17	244	12
22	52	46	59	69	623	248	90	420	55	37	135	20
23	49	44	57	65	581	190	80	272	48	28	98	35
24	47	46	56	50	392	204	71	162	44	20	75	20
25	44	44	159	62	272	272	64	122	40	17	62	15
26	42	408	132	52	190	239	59	88	36	16	51	15
27	38	335	115	52	125	177	83	74	34	15	45	13
28	52	239	98	43	104	162	71	63	32	19	40	12
29	48	144	87	38	87	329	64	55	30	160	40	11
30	41	108	80	39	---	292	100	50	31	52	36	11
31	38	---	72	46	---	526	---	60	---	32	32	---
TOTAL	5795	3047	3071	2005	3302	7218	7335	3332	3761	1398	3615	579
MEAN	187	102	99.1	64.7	114	233	245	107	125	45.1	117	19.3
MAX	661	408	318	115	623	661	886	636	674	287	648	41
MIN	38	37	53	38	17	62	59	36	30	15	14	11
CFSM	3.82	2.09	2.03	1.32	2.33	4.77	5.01	2.19	2.56	.92	2.39	.40
IN.	4.41	2.32	2.34	1.53	2.51	5.49	5.58	2.53	2.86	1.06	2.75	.44

CAL YR 1979 TOTAL 42232 MEAN 116 MAX 1570 MIN 12 CFSM 2.37 IN 32.13
WTR YR 1980 TOTAL 44458 MEAN 121 MAX 886 MIN 11 CFSM 2.47 IN 33.82

03076600 BEAR CREEK AT FRIENDSVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Year year 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
NOV , 1979												
14...	1145	56	85	6.7	2.0	5.0	12.1	.0	.0	1	11	64
APR , 1980												
09...	1145	887	72	6.7	19.0	9.5	11.5	.1	5.0	11	13	57
SEP												
09...	1200	18	82	7.4	20.0	15.9	9.5	.0	.0	--	8.3	78

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979											
14...	.09	9.68	120	100	20	10	0	10	--	--	--
APR , 1980											
09...	.08	137	2900	2800	60	250	210	40	161	386	--
SEP											
09...	.11	3.79	--	--	60	--	--	10	--	--	17.0

03077940 SOUTH BRANCH CASSELMAN RIVER NEAR BITTINGER, MD

LOCATION.--Lat 39°36'06", long 79°12'17", Garrett County, Hydrologic Unit 05020006, on right bank 1.1 mi (1.8 km) east of Bittinger, 5.4 mi (8.7 km) upstream from Casselman River.

DRAINAGE AREA.--3.22 mi² (8.35 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,450.00 ft (747 m) from topographic map.

REMARKS.--Records good except those for winter periods, which are fair. Several observations of water temperature were made during the period December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 153 ft³/s (4.33 m³/s) Apr. 9, 1980, gage height, 4.76 ft (1.451 m); minimum, 0.23 ft³/s (0.007 m³/s) Aug. 17, 1977, gage height, 0.93 ft (0.283 m);

EXTREMES FOR PERIOD DECEMBER 1976 TO SEPTEMBER 1980.--Peak discharges above base of 68 ft³/s (1.93 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 24, 1977	1830	84	2.38	3.32	1.012
Mar. 4, 1977	1415	96	2.72	3.57	1.088
Dec. 1, 1977	0215	92	2.61	3.50	1.067
Mar. 21, 1978	1715	102	2.89	3.72	1.134
Mar. 28, 1978	1830	76	2.15	3.16	0.963
Apr. 5, 1978	0115	84	2.38	3.33	1.015
Dec. 3, 1978	2200	78	2.21	3.20	0.975
Dec. 8, 1978	1900	92	2.61	3.51	1.070
Dec. 21, 1978	0300	92	2.61	3.51	1.070
Feb. 24, 1979	2130	79	2.24	3.23	0.985
Mar. 31, 1980	1430	80	2.27	3.25	0.991
Apr. 9, 1980	0015	*153	4.33	4.76	1.451
May 21, 1980	0445	111	3.14	3.92	1.195
June 10, 1980	0915	70	1.98	3.04	0.927
Mar. 13, 1977	0600	*104	2.95	3.75	1.143
Apr. 2, 1977	1300	69	1.95	3.02	0.920
May 30, 1978	1145	75	2.12	3.14	0.957
June 20, 1978	1300	*118	3.34	4.07	1.241
July 3, 1978	1115	85	2.41	3.36	1.024
Feb. 26, 1979	0130	70	1.98	3.04	0.927
Mar. 5, 1979	0700	*120	3.40	4.10	1.250
Apr. 2, 1979	0030	74	2.10	3.13	0.954
July 8, 1980	1630	152	4.30	4.75	1.448
Aug. 18, 1980	0730	86	2.44	3.37	1.027
Sept. 5, 1980	0115	70	1.98	3.04	0.927

Water year 1977: Minimum discharge, 0.23 ft³/s (0.007 m³/s) Aug. 17, 1977.

Water year 1978: Minimum discharge, 0.35 ft³/s (0.010 m³/s) Oct. 1, 1977, Aug. 29, 30, 1978.

Water year 1979: Minimum discharge, 0.35 ft³/s (0.010 m³/s) Oct. 3, 4, 12, 1978.

Water year 1980: Minimum discharge, 0.59 ft³/s (0.017 m³/s) Aug. 7, 8, Sept. 29, 1980.

03077940 SOUTH BRANCH CASSELMAN RIVER NEAR BITTINGER, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	20	3.6	2.2	1.1	14	9.2	2.3	.93	.68	.52	.43
2	4.0	16	3.3	2.0	1.1	13	30	2.2	.82	.60	.46	.70
3	2.8	13	3.1	1.9	1.1	10	19	2.2	.88	.54	.40	.64
4	2.1	10	3.2	1.9	1.1	60	18	2.2	.72	.50	.35	.36
5	1.7	8.6	3.1	1.8	1.1	39	34	4.2	.85	.48	.35	.44
6	1.5	7.6	3.0	1.7	1.1	24	20	5.5	1.3	.46	.40	.41
7	2.5	7.0	25	1.7	1.1	17	18	6.5	1.1	.50	.59	.36
8	10	6.2	14	1.6	1.1	14	17	4.4	.88	.74	.92	.39
9	48	5.8	11	1.6	1.2	13	13	2.9	3.2	.62	.52	.40
10	23	6.6	8.8	1.5	1.3	13	12	2.7	2.8	.54	.46	.38
11	12	7.2	9.2	1.4	2.7	12	11	2.5	1.4	.48	.40	.35
12	10	6.6	10	1.4	5.2	14	9.4	2.3	1.0	1.0	1.8	.35
13	8.5	6.0	8.3	1.3	6.4	55	8.5	2.2	.91	7.4	.83	.40
14	7.6	5.4	8.7	1.3	5.0	24	7.8	2.3	1.3	3.3	.92	.52
15	6.6	5.0	5.9	1.3	4.4	18	6.6	2.0	1.9	2.4	.66	.52
16	7.4	4.9	5.5	1.3	3.5	15	5.3	1.9	1.0	1.7	.46	1.0
17	5.6	4.6	5.2	1.3	2.7	13	4.7	2.0	.88	2.2	6.8	1.4
18	4.4	4.4	4.5	1.2	2.1	28	4.6	1.9	3.4	1.7	2.2	.59
19	3.6	4.2	5.0	1.2	1.6	18	4.2	3.8	1.5	1.2	1.1	.46
20	5.6	4.0	5.0	1.2	1.4	16	4.0	2.3	1.6	.78	.79	.52
21	15	3.9	4.7	1.2	1.4	14	3.8	1.9	2.8	.92	.52	.35
22	9.4	3.6	4.1	1.2	2.9	33	3.3	1.7	1.4	1.1	1.2	.35
23	8.0	3.4	3.5	1.2	12	22	3.1	1.6	1.1	.59	.75	.35
24	14	3.4	3.1	1.2	55	17	3.1	1.6	.98	.52	.70	.35
25	22	3.7	2.9	1.2	39	13	3.0	.92	1.0	1.2	.83	.35
26	16	4.0	2.9	1.2	31	12	2.7	1.2	1.1	1.7	.52	2.5
27	12	4.6	2.8	1.2	33	11	2.7	1.1	1.0	.83	.46	1.2
28	10	4.0	2.7	1.1	21	24	2.8	.95	.90	.59	.45	1.2
29	9.2	3.5	2.6	1.1	---	17	3.4	.90	.87	.52	.49	.66
30	8.0	3.7	2.5	1.1	---	13	2.5	.94	.78	.83	.45	.46
31	22	---	2.3	1.1	---	11	---	1.1	---	.66	.39	---
TOTAL	318.5	190.9	179.5	43.6	241.6	617	286.7	72.21	40.30	37.28	27.69	18.39
MEAN	10.3	6.36	5.79	1.41	8.63	19.9	9.56	2.33	1.34	1.20	.89	.61
MAX	48	20	25	2.2	55	60	34	6.5	3.4	7.4	6.8	2.5
MIN	1.5	3.4	2.3	1.1	1.1	10	2.5	.90	.72	.46	.35	.35
CFSM	3.20	1.98	1.80	.44	2.68	6.18	2.97	.72	.42	.37	.28	.19
IN.	3.68	2.20	2.07	.50	2.79	7.13	3.31	.83	.47	.43	.32	.21

WTR YR 1977 TOTAL 2073.67 MEAN 5.68 MAX 60 MIN .35 CFSM 1.76 IN 23.95

03077940 SOUTH BRANCH CASSELMAN RIVER NEAR BITTINGER, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	1.2	61	5.8	4.6	1.4	34	4.4	6.0	3.5	2.0	3.2
2	2.8	1.5	26	5.7	4.4	1.3	29	4.0	5.9	3.6	1.5	2.0
3	1.7	2.0	17	6.1	4.2	1.3	27	3.9	12	34	1.1	1.8
4	1.1	2.6	14	5.2	3.9	1.3	25	6.2	7.0	16	1.5	1.9
5	.83	6.3	13	4.5	3.6	1.2	40	19	5.7	10	1.1	1.4
6	1.0	10	12	4.4	3.3	1.2	23	9.6	4.8	7.6	1.4	1.0
7	1.0	15	11	4.5	3.2	1.2	31	7.4	6.8	6.2	2.4	.83
8	1.6	18	8.7	11	3.0	1.2	20	9.4	7.0	5.9	2.2	.74
9	11	10	8.0	21	2.8	1.4	15	14	5.0	5.3	1.1	.66
10	4.3	11	7.6	12	2.7	1.7	13	8.9	3.9	14	8.0	.66
11	2.6	9.6	7.0	7.6	2.6	2.5	12	7.6	3.5	7.2	2.8	.59
12	2.2	7.6	6.6	6.4	2.4	4.0	11	7.0	3.6	5.3	3.0	.92
13	2.0	6.7	7.0	5.0	2.2	7.0	9.2	20	3.4	4.7	3.6	2.4
14	1.8	6.3	19	4.8	2.1	32	8.0	20	3.0	6.2	2.3	1.2
15	1.7	6.2	25	4.5	2.2	22	7.2	19	2.6	4.8	1.8	2.4
16	3.2	6.1	13	4.2	2.1	15	6.6	32	2.4	4.8	1.5	1.5
17	3.3	8.2	12	4.0	2.0	11	6.0	34	2.2	5.3	1.1	1.4
18	2.4	8.0	23	4.0	1.9	8.7	7.2	30	2.2	3.8	1.0	.92
19	2.3	6.1	17	4.0	1.8	15	9.6	19	2.2	3.2	.92	.74
20	2.2	5.5	14	4.4	1.7	21	11	14	20	2.8	.74	.66
21	1.9	5.3	12	4.0	1.7	55	9.6	12	6.6	2.5	.66	.59
22	1.7	5.6	10	3.7	1.6	46	8.5	10	4.2	2.4	.66	.92
23	1.7	7.3	9.1	3.5	1.6	34	7.4	9.4	3.6	2.2	.59	.74
24	1.5	7.4	9.8	4.4	1.7	30	6.6	12	2.8	2.0	.52	.66
25	1.5	6.5	21	16	1.7	24	6.2	9.4	2.8	2.3	.52	.59
26	1.4	7.1	11	27	1.6	24	6.2	7.4	4.3	2.0	.52	.52
27	1.7	5.9	9.2	10	1.5	29	5.5	6.4	6.3	1.8	.46	.52
28	1.7	5.7	8.0	7.8	1.4	39	5.0	5.9	10	2.7	.46	.46
29	1.4	5.5	7.4	6.8	---	42	4.7	5.3	5.0	1.7	.46	.46
30	1.3	10	6.6	5.9	---	29	4.5	18	4.0	1.5	1.8	.46
31	1.2	---	6.3	5.0	---	25	---	8.9	---	3.5	17	---
TOTAL	66.77	214.2	432.3	223.2	69.5	528.4	409.0	394.1	158.8	178.8	64.71	32.84
MEAN	2.15	7.14	13.9	7.20	2.48	17.0	13.6	12.7	5.29	5.77	2.09	1.09
MAX	11	18	61	27	4.6	55	40	34	20	34	17	3.2
MIN	.74	1.2	6.3	3.5	1.4	1.2	4.5	3.9	2.2	1.5	.46	.46
CFSM	.67	2.22	4.32	2.24	.77	5.28	4.22	3.94	1.64	1.79	.65	.34
IN.	.77	2.47	4.99	2.58	.80	6.10	4.72	4.55	1.83	2.06	.75	.38

CAL YR 1977 TOTAL 2098.04 MEAN 5.75 MAX 61 MIN .35 CFSM 1.79 IN 24.23
WTR YR 1978 TOTAL 2772.62 MEAN 7.60 MAX 61 MIN .46 CFSM 2.36 IN 32.02

03077940 SOUTH BRANCH CASSELMAN RIVER NEAR BITTINGER, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.52	5.0	30	6.0	14	15	5.0	6.4	3.5	2.3	.75
2	.46	.46	4.5	32	5.8	21	31	4.5	5.7	3.3	1.5	.71
3	.46	.46	19	16	6.2	28	17	6.6	6.4	3.4	1.2	1.7
4	.52	.46	38	12	5.6	77	15	15	5.5	5.2	1.1	1.4
5	.46	.46	15	10	5.2	97	14	12	4.4	7.0	1.0	1.2
6	.40	.46	10	9.4	4.9	48	12	8.3	3.8	4.0	.94	8.2
7	.40	.46	8.5	13	4.9	33	9.9	7.2	3.5	2.9	.88	4.0
8	.46	.52	31	17	4.7	29	9.2	6.4	3.3	2.1	1.4	2.8
9	.46	.46	37	12	4.4	27	12	5.7	3.0	1.6	2.0	2.1
10	.40	.46	19	11	4.3	30	11	6.2	3.2	1.7	2.2	1.7
11	.40	.40	13	10	4.1	26	9.4	9.9	2.8	1.9	3.1	1.4
12	.40	.40	11	9.0	4.0	19	8.1	8.5	2.4	1.5	13	1.2
13	.40	.40	9.4	9.2	3.9	18	7.6	9.6	2.2	1.2	6.4	1.1
14	1.4	.40	8.5	11	3.9	26	7.4	7.2	2.2	3.9	5.2	1.6
15	1.0	1.1	7.6	9.4	3.9	19	10	6.2	2.1	2.8	3.6	1.8
16	.92	6.0	7.0	9.0	4.4	15	13	5.7	2.0	2.4	2.5	1.3
17	1.2	4.5	7.8	11	6.8	14	11	5.3	1.9	2.3	1.8	1.0
18	.83	4.2	6.2	14	6.2	14	8.7	5.0	1.8	1.7	1.8	.66
19	.66	2.7	5.9	10	5.8	14	7.6	4.8	1.5	1.5	2.6	.66
20	.59	2.2	14	9.4	5.4	13	6.8	4.4	1.3	1.2	2.3	.64
21	.59	1.9	42	17	9.0	12	6.2	4.4	1.0	1.8	2.8	2.0
22	.52	1.8	14	14	21	12	5.9	4.2	1.2	1.5	2.1	7.2
23	.46	1.8	11	13	31	11	5.5	5.0	1.3	1.3	1.8	5.4
24	.52	3.2	16	11	43	26	5.2	13	1.1	1.1	1.9	4.2
25	.52	2.5	25	10	53	23	4.8	19	1.0	1.0	3.9	3.4
26	.66	2.0	13	9.4	38	14	6.4	9.9	.90	1.1	2.2	3.0
27	2.7	2.7	10	9.0	20	11	10	10	.80	1.5	2.7	2.8
28	1.1	7.2	8.4	8.0	14	9.6	7.2	12	.70	1.3	1.5	3.7
29	.74	5.2	7.8	7.2	---	9.2	6.0	8.7	1.0	2.1	1.2	5.4
30	.66	5.3	7.0	6.6	---	8.5	5.3	7.4	1.9	7.0	.94	4.7
31	.52	---	11	6.2	---	8.7	---	6.6	---	3.2	.79	---
TOTAL	21.27	60.62	442.6	375.8	329.4	727.0	298.4	243.7	76.30	78.0	78.65	77.72
MEAN	.69	2.02	14.3	12.1	11.8	23.5	9.95	7.86	2.54	2.52	2.54	2.59
MAX	2.7	7.2	42	32	53	97	31	19	6.4	7.0	13	8.2
MIN	.40	.40	4.5	6.2	3.9	8.5	4.8	4.2	.70	1.0	.79	.64
CFSM	.21	.63	4.44	3.76	3.67	7.30	3.09	2.44	.79	.78	.79	.80
IN.	.25	.70	5.11	4.34	3.80	8.40	3.45	2.81	.88	.90	.91	.90

CAL YR 1978 TOTAL 2583.84 MEAN 7.08 MAX 55 MIN .40 CFSM 2.20 IN 29.84
WTR YR 1979 TOTAL 2809.46 MEAN 7.70 MAX 97 MIN .40 CFSM 2.39 IN 32.45

03077940 SOUTH BRANCH CASSELMAN RIVER NEAR BITTINGER, MD--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	2.5	3.2	3.5	2.0	5.7	23	11	4.8	1.8	1.5	2.2
2	8.3	12	3.2	3.0	1.8	4.4	15	8.3	7.6	1.7	1.2	2.2
3	27	7.6	3.0	2.8	1.7	4.8	12	7.4	12	1.7	1.9	3.2
4	15	5.0	2.8	2.7	1.6	3.9	19	6.6	9.4	1.7	1.4	5.9
5	20	4.2	2.8	2.6	1.5	11	13	6.0	5.5	1.4	.92	17
6	25	3.9	3.6	2.5	1.4	11	10	5.5	6.0	1.5	.83	4.7
7	12	3.8	4.0	2.4	1.3	7.4	8.7	5.3	5.5	.92	.74	3.5
8	14	3.6	3.2	2.3	1.2	14	13	4.8	5.7	30	.66	3.0
9	34	3.5	2.8	2.2	1.1	10	80	4.5	5.5	13	1.7	2.7
10	26	3.9	2.7	2.3	1.1	7.4	22	4.2	30	6.4	1.8	3.6
11	17	3.5	2.7	3.8	1.0	7.0	16	3.9	11	4.7	7.6	2.7
12	19	3.2	2.7	8.3	.95	5.7	13	4.5	8.0	3.8	19	2.4
13	16	3.0	12	4.0	.92	6.4	12	5.2	6.8	3.6	4.5	2.2
14	11	3.0	7.4	3.9	.88	6.8	31	3.8	5.7	3.0	3.0	2.2
15	9.4	2.8	5.0	3.9	.86	5.3	24	3.5	5.5	2.6	5.5	2.2
16	8.0	3.4	4.4	3.8	.90	6.0	17	3.0	14	2.5	5.7	1.9
17	7.2	3.1	4.2	3.6	1.0	24	14	3.1	7.6	2.2	3.2	1.8
18	6.4	2.7	3.9	3.7	1.1	29	12	5.7	5.9	2.2	31	1.6
19	5.9	2.5	3.5	3.6	1.2	14	10	6.4	5.0	1.9	17	1.5
20	5.2	2.4	3.2	3.3	1.5	12	9.2	13	4.4	1.7	9.6	1.2
21	4.8	2.4	3.0	3.1	5.0	21	8.3	48	3.8	1.5	7.4	1.4
22	4.4	2.2	3.0	2.9	29	14	7.6	14	3.5	2.2	6.2	1.9
23	4.0	2.2	3.0	2.8	18	12	7.2	10	3.2	1.9	5.3	2.4
24	3.9	2.3	3.4	2.7	11	13	6.4	8.9	2.8	1.6	4.7	1.7
25	3.8	2.4	15	2.7	7.8	19	5.9	8.0	2.7	1.2	4.0	1.2
26	3.5	11	6.4	2.6	6.4	14	5.5	7.0	2.4	1.1	3.6	1.7
27	3.1	5.7	5.0	2.5	7.0	10	13	5.9	2.2	.92	3.2	1.2
28	3.8	4.2	4.4	2.4	5.9	11	8.7	5.5	2.2	2.9	2.8	.92
29	3.5	3.8	4.0	2.3	5.2	28	6.8	5.0	2.0	7.2	2.6	.83
30	3.0	3.5	3.9	2.2	---	14	16	4.5	2.0	2.4	2.5	.83
31	2.7	---	3.8	2.1	---	40	---	4.7	---	1.7	2.4	---
TOTAL	332.1	119.3	135.2	96.5	120.31	391.8	459.3	237.2	192.7	112.94	163.45	81.78
MEAN	10.7	3.98	4.36	3.11	4.15	12.6	15.3	7.65	6.42	3.64	5.27	2.73
MAX	34	12	15	8.3	29	40	80	48	30	30	31	17
MIN	2.7	2.2	2.7	2.1	.86	3.9	5.5	3.0	2.0	.92	.66	.83
CFSM	3.32	1.24	1.35	.97	1.29	3.91	4.75	2.38	1.99	1.13	1.64	.85
IN.	3.84	1.38	1.56	1.11	1.39	4.52	5.30	2.74	2.23	1.30	1.89	.94

CAL YR 1979 TOTAL 2871.57 MEAN 7.87 MAX 97 MIN .64 CFSM 2.44 IN 33.16
WTR YR 1980 TOTAL 2442.58 MEAN 6.67 MAX 80 MIN .66 CFSM 2.07 IN 28.21

03077940 SOUTH BRANCH CASSELMAN RIVER NEAR BITTINGER, MD

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: June to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
APR									
09...	1700	46	71	5.7	11.0	9.0	10.7	22	21
MAY									
08...	1030	5.5	57	5.3	10.0	8.4	10.4	26	20
SEP									
09...	1600	2.9	74	6.4	23.0	16.9	8.5	31	21

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)
APR									
09...	.1	5.0	5.8	1.8	1.3	11	.1	1.4	1
MAY									
08...	.1	5.0	6.5	2.3	1.0	8	.1	.8	6
SEP									
09...	.0	.0	7.8	2.8	2.1	12	.2	1.1	10

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
APR									
09...	21	2.8	.1	3.2	50	41	.07	6.21	.66
MAY									
08...	23	2.1	.1	4.0	48	46	.07	.71	.61
SEP									
09...	24	2.0	.1	5.1	68	51	.09	.53	--

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)
SEP , 1980										
09...	1	0	100	0	10	10	20	10	6	<10

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
APR									
09...	1100	1000	100	--	--	--	310	60	250
MAY									
08...	220	180	40	--	--	--	250	30	220
SEP									
09...	510	380	130	2800	3	10	60	0	70

03077940 SOUTH BRANCH CASSELMAN RIVER NEAR BITTINGER, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
APR							
09...	--	--	--	--	--	--	--
MAY							
08...	--	--	--	--	--	--	--
SEP							
09...	120	.1	.00	0	0	0	30

DATE	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR						
09...	--	--	--	37	4.6	--
MAY						
08...	--	1.3	3.6	--	--	6.00
SEP						
09...	30	--	--	--	--	0.00

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1			---	---	7	.08	3	.01	6	.02	4	.02
2			---	---	60	1.4	4	.02	10	.03	3	.02
3			---	---	60	5.0	3	.01	6	.03	2	.02
4			---	---	31	1.1	2	.00	4	.02	1	.02
5			---	---	10	.15	3	.01	1	.00	11	.54
6			---	---	19	.31	3	.01	1	.00	2	.03
7			---	---	27	.40	1	.00	2	.00	1	.00
8			---	---	21	.32	226	34	5	.00	1	.00
9			---	---	14	.25	52	2.7	6	.03	3	.02
10			---	---	53	6.1	13	.24	10	.22	5	.05
11			---	---	9	.27	11	.14	34	.86	2	.01
12			---	---	6	.13	11	.11	66	5.2	4	.03
13			---	---	6	.11	12	.12	13	.18	3	.02
14			---	---	6	.09	10	.08	4	.03	3	.02
15			---	---	4	.06	10	.07	32	1.0	4	.02
16			---	---	15	.74	5	.03	20	.40	7	.04
17			---	---	4	.08	5	.03	6	.05	5	.02
18			---	---	6	.10	5	.03	98	13	4	.02
19			---	---	9	.12	5	.03	26	1.5	6	.02
20			---	---	7	.08	7	.03	3	.09	5	.02
21			---	---	4	.04	6	.02	2	.04	6	.02
22			---	---	2	.02	6	.04	2	.03	5	.03
23			---	---	1	.00	5	.03	2	.03	5	.03
24			9	.22	3	.02	4	.02	2	.03	5	.02
25			8	.17	3	.02	4	.01	1	.01	5	.02
26			7	.13	3	.02	4	.01	1	.00	5	.02
27			6	.10	1	.00	4	.00	1	.00	9	.03
28			6	.09	1	.00	13	.29	2	.02	3	.00
29			7	.09	1	.00	32	1.0	4	.03	4	.00
30			9	.11	5	.03	6	.04	7	.05	3	.00
31			8	.10	---	---	4	.02	7	.05	---	---
TOTAL			---	1.01	---	17.04	---	39.15	---	22.95	---	1.11

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD

LOCATION.--Lat 39°42'08", long 79°08'12", Garrett County, Hydrologic Unit 05020006, on left bank at downstream side of highway bridge, 0.3 mi (0.5 km) upstream from Slaubaugh Run, 0.7 mi (1.1 km) downstream from U.S. Highway 40, and 1.0 mi (1.6 km) northeast of Grantsville.

DRAINAGE AREA.--62.5 mi² (161.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1947 to current year.

REVISED RECORDS.--WSP 1143: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,088.97 ft (636.718 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--33 years, 119 ft³/s (3.370 m³/s), 25.86 in/yr (657 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,400 ft³/s (238 m³/s) Oct. 15, 1954, gage height, 10.70 ft (3.261 m), from rating curve extended above 1,600 ft³/s (73.6 m³/s) on basis of contracted-opening measurement at gage height 8.13 ft (2.478 m); no flow Aug. 31, 1962, result of regulation from unknown source.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 22	1115	1040	29.5	3.73	1.137
Apr. 9	0530	*2470	70.0	5.43	1.655
May 21	0800	1480	41.9	4.30	1.311
July 8	2330	1080	30.6	3.79	1.155
Aug. 18	Unknown	2250	63.7	5.19	1.582

Minimum discharge, 12 ft³/s (0.34 m³/s) July 28, Sept. 29, 30, gage height, 1.17 ft (0.357 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	61	96	84	46	84	568	244	94	32	26	27
2	124	299	92	72	44	94	349	171	100	25	22	26
3	532	279	90	68	43	98	265	144	144	38	27	32
4	215	157	94	64	41	136	406	127	198	34	26	30
5	351	129	88	60	39	198	305	110	96	27	28	106
6	398	115	98	56	38	297	224	98	96	26	18	53
7	273	110	124	54	36	179	182	92	98	19	15	33
8	343	102	94	52	35	351	202	80	108	385	15	27
9	574	98	78	50	34	302	1440	74	92	429	23	24
10	638	117	74	51	32	191	511	68	571	117	22	34
11	397	100	74	76	29	182	333	64	271	73	59	26
12	374	86	76	160	27	144	264	69	157	53	250	22
13	363	82	323	145	26	124	236	102	125	55	110	19
14	239	76	260	135	24	127	538	74	106	39	62	18
15	185	73	157	130	24	122	565	62	94	32	110	17
16	154	90	134	122	25	139	362	55	327	29	115	18
17	136	84	117	117	27	407	286	50	171	26	74	17
18	120	76	100	124	29	715	232	80	117	23	600	16
19	104	68	110	122	32	385	186	129	100	20	560	15
20	94	64	88	108	36	302	157	230	84	18	400	14
21	86	59	78	94	210	402	139	960	71	16	180	12
22	78	58	76	92	612	337	122	378	62	32	102	17
23	76	56	82	82	564	261	113	233	55	37	82	38
24	74	58	92	55	341	280	100	179	50	23	68	30
25	69	61	321	88	224	355	94	171	46	18	58	19
26	66	371	181	78	168	241	88	134	41	15	52	19
27	59	223	131	86	134	191	229	108	38	13	43	18
28	108	146	110	66	124	210	190	94	34	13	38	14
29	100	124	102	54	106	603	139	82	31	221	36	12
30	73	106	98	50	---	330	263	74	41	64	36	12
31	64	---	92	48	---	656	---	90	---	36	31	---
TOTAL	6543	3528	3730	2635	3150	8443	9088	4626	3618	1988	3280	765
MEAN	211	118	120	85.0	109	272	303	149	121	64.1	106	25.5
MAX	638	371	323	160	612	715	1440	960	571	429	600	106
MIN	59	56	74	48	24	84	88	50	31	13	15	12
CFSM	3.38	1.89	1.92	1.36	1.74	4.35	4.85	2.38	1.94	1.03	1.70	.41
IN.	3.89	2.10	2.22	1.57	1.87	5.03	5.41	2.75	2.15	1.18	1.95	.46

CAL YR 1979 TOTAL 56173 MEAN 154 MAX 1840 MIN 13 CFSM 2.46 IN 33.43
WTR YR 1980 TOTAL 51394 MEAN 140 MAX 1440 MIN 12 CFSM 2.24 IN 30.59

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT , 1979									
23...	0830	71	111	7.1	16.0	13.5	9.2	37	20
NOV									
14...	1200	73	112	8.4	.0	6.0	11.3	36	28
DEC									
14...	0900	275	98	6.9	-2.0	3.0	12.1	32	25
JAN , 1980									
16...	1230	111	116	6.9	8.5	1.5	13.4	35	29
FEB									
15...	1345	25	140	6.9	2.0	.5	--	47	28
APR									
09...	1345	1280	66	6.0	17.5	9.0	11.1	21	17
JUN									
12...	1045	162	85	6.4	10.5	11.0	10.7	29	21
AUG									
27...	0900	40	126	6.7	22.5	17.5	9.0	52	39
SEP									
09...	1945	21	124	7.0	18.0	20.3	7.5	--	--

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
OCT , 1979									
23...	.0	.0	10	2.8	3.1	20	.2	1.0	17
NOV									
14...	--	--	10	2.6	3.0	20	.2	1.0	8
DEC									
14...	.0	.0	9.3	2.2	3.1	22	.2	1.1	7
JAN , 1980									
16...	.0	.0	9.9	2.6	5.6	25	.4	1.0	6
FEB									
15...	.0	.0	13	3.5	5.3	19	.3	.9	19
APR									
09...	.1	5.0	6.0	1.4	1.9	16	.2	1.3	4
JUN									
12...	.1	5.0	8.1	2.2	2.9	17	.2	.8	8
AUG									
27...	.1	5.0	14	4.2	3.9	14	.2	1.1	13
SEP									
09...	--	--	--	--	--	--	--	--	--

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT , 1979								
23...	25	5.9	.1	4.6	61	64	.08	11.7
NOV								
14...	22	6.3	.1	4.5	--	57	.08	11.2
DEC								
14...	21	5.8	.1	4.2	60	54	.08	44.5
JAN , 1980								
16...	19	10	.1	4.0	65	59	.09	19.5
FEB								
15...	28	11	.1	4.4	66	80	.09	4.45
APR								
09...	17	3.4	.0	2.9	54	40	.07	187
JUN								
12...	22	5.0	.1	4.2	68	53	.09	29.7
AUG								
27...	38	6.8	.1	5.0	90	83	.12	9.87
SEP								
09...	31	--	--	--	71	--	.10	4.83

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT , 1979						
23...	520	450	70	100	20	80
NOV						
14...	270	200	70	130	10	120
DEC						
14...	800	740	60	160	40	120
JAN , 1980						
16...	80	10	70	150	30	120
FEB						
15...	140	110	30	130	20	110
APR						
09...	3500	3400	120	390	130	260
JUN						
12...	590	520	70	130	30	100
AUG						
27...	530	440	90	110	20	90
SEP						
09...	510	250	260	40	10	30

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	COAL IN BOTTOM MATE-RIAL (GM/KG)
OCT , 1979				
23...	10	1.9	79	--
NOV				
14...	2	.39	--	--
DEC				
14...	18	13	--	--
JAN , 1980				
16...	17	5.1	--	--
FEB				
15...	1	.07	--	--
APR				
09...	87	301	--	--
JUN				
12...	10	4.4	--	--
AUG				
27...	7	.77	--	--
SEP				
09...	--	--	--	17.0

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
DELAWARE RIVER BASIN									
01477800 - SHELLPOT C AT WILMINGTON DE (LAT 39 45 39 LONG 075 31 10)									
NOV , 1979					MAY , 1980				
27...	1120	10	13.0	12.0	14...	1445	4.1	22.0	20.5
JAN , 1980					21...	0910	37	16.0	15.5
09...	1045	2.6	2.0	1.5	JUN				
FEB					18...	0930	1.6	18.5	17.0
07...	1325	2.5	1.0	1.5	AUG				
APR					11...	1230	2.5	29.0	26.0
01...	1315	38	12.5	10.0	SEP				
MAY					24...	1220	.33	22.5	19.5
01...	1400	30	19.0	14.0					
01478000 - CHRISTINA R AT COOCHS BRIDGE DE (LAT 39 38 16 LONG 075 43 46)									
OCT , 1979					MAY , 1980				
15...	1200	13	16.0	13.5	16...	1300	11	18.5	17.5
NOV					21...	1245	40	16.0	16.5
15...	0950	17	7.5	8.0	JUL				
JAN , 1980					01...	1340	3.3	26.0	20.5
14...	1010	26	7.0	2.0	AUG				
FEB					06...	1150	2.0	33.0	25.0
13...	1035	4.2	.0	.0	21...	1030	16	21.0	22.0
19...	1215	17	4.5	2.5	SEP				
APR					15...	1330	2.9	23.5	22.5
08...	1220	29	20.5	14.5					
01478040 - CHRISTINA R NR BEAR DE (LAT 39 38 12 LONG 075 40 53)									
OCT , 1979					APR , 1980				
15...	1410	34	17.5	17.0	04...	1400	162	20.0	12.0
NOV					MAY				
15...	1145	39	8.5	8.0	19...	1405	58	23.5	18.5
JAN , 1980					21...	1345	96	17.0	17.0
14...	1210	57	8.0	3.0	JUL				
FEB					02...	1225	14	27.0	22.5
13...	1045	14	.5	.0	AUG				
19...	1355	19	7.0	3.5	06...	1000	8.9	31.0	24.5
MAR					SEP				
21...	1645	328	12.0	10.0	15...	1130	3.8	23.5	21.0
01478500 - WHITE CLAY C AB NEWARK DE (LAT 39 42 50 LONG 075 45 35)									
OCT , 1979					JAN , 1980				
18...	1150	92	21.0	13.0	16...	1130	79	10.0	5.0
NOV									
15...	1425	96	8.0	7.0					
01479000 - WHITE CLAY C NR NEWARK DE (LAT 39 42 00 LONG 075 41 10)									
OCT , 1979					MAY , 1980				
15...	1015	110	10.0	13.0	14...	1115	142	21.5	18.0
NOV					JUL				
28...	1115	149	14.5	10.0	07...	1010	60	21.5	20.0
JAN , 1980					AUG				
10...	1210	77	2.0	.5	12...	1005	76	29.0	27.0
FEB					SEP				
21...	1130	78	13.0	4.5	19...	1230	29	23.0	21.0
APR									
03...	0945	165	13.5	10.0					
01480000 - RED CLAY C AT WOODDALE DE (LAT 39 45 52 LONG 075 38 08)									
OCT , 1979					MAY , 1980				
18...	1015	57	19.0	12.5	12...	1230	77	22.5	14.5
NOV					21...	1100	89	15.5	16.0
19...	1005	56	13.0	7.5	JUL				
19...	1330	59	13.0	7.5	07...	1250	31	26.5	22.0
JAN , 1980					AUG				
10...	1445	54	2.5	2.0	12...	1120	48	28.0	24.5
FEB					SEP				
05...	1240	63	4.5	1.5	03...	1510	16	28.5	26.0
21...	1400	47	15.5	6.5	19...	1505	19	24.0	20.5
APR									
03...	1345	90	17.5	11.5					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
DELAWARE RIVER BASIN--CONTINUED									
01480100 - L MILL C AT ELSMERE DE (LAT 39 44 05 LONG 075 35 14)									
OCT , 1979					MAY , 1980				
16...	1200	4.7	19.0	13.0	06...	0935	5.4	22.5	17.0
JAN , 1980					12...	1025	11	19.0	16.0
09...	1245	3.6	-.5	2.0	JUN				
FEB					19...	1005	2.8	19.0	19.0
21...	1310	2.5	15.0	9.0	AUG				
APR					12...	1355	3.7	29.0	25.0
03...	1215	9.6	16.0	15.5					
01481500 - BRANDYWINE C AT WILMINGTON DE (LAT 39 46 09 LONG 075 34 25)									
NOV , 1979					JUL , 1980				
01...	1215	539	18.5	9.5	01...	1130	361	22.0	22.0
DEC					AUG				
03...	1230	545	3.0	2.5	01...	1150	210	29.0	23.5
JAN , 1980					SEP				
02...	1010	432	3.5	2.0	02...	1045	124	29.5	27.0
APR					17...	1540	91	29.0	22.0
01...	1110	2510	17.0	6.5	24...	0945	91	22.5	22.5
MAY									
01...	1110	3050	16.5	12.0					
01482200 - ARMY C AT STATE ROAD DE (LAT 39 38 56 LONG 075 37 18)									
NOV , 1979					APR , 1980				
01...	1700	.18	20.0	11.5	08...	1045	.62	19.0	13.0
14...	1400	.65	8.5	10.0	30...	1230	3.1	11.0	12.0
JAN , 1980					MAY				
08...	1315	.39	2.0	1.5	20...	0955	.71	17.0	16.5
FEB					JUL				
13...	1200	.19	1.0	.5	02...	0925	.13	24.5	21.5
MAR					17...	1025	.13	26.0	24.0
14...	1300	7.5	1.5	4.5	AUG				
21...	1440	23	14.0	11.0	05...	1250	.10	33.0	25.5
01482298 - RED LION C NR RED LION DE (LAT 39 36 16 LONG 075 40 06)									
OCT , 1979					MAY , 1980				
05...	1000	2.8	23.0	17.0	19...	1150	3.3	26.0	17.0
NOV					JUL				
01...	1357	2.0	17.0	12.0	02...	0850	.97	22.0	19.0
14...	1455	3.9	10.0	10.0	17...	0945	.55	27.0	22.5
JAN , 1980					AUG				
08...	1135	2.3	3.0	3.5	05...	1130	.61	32.0	25.0
FEB					SEP				
13...	1055	1.7	.5	.5	15...	1025	.11	23.0	20.5
APR									
08...	1320	3.8	16.5	14.5					
01483170 - DRAWYER C NR ODESSA DE (LAT 39 27 45 LONG 075 41 17)									
OCT , 1979					MAY , 1980				
04...	1305	3.9	26.0	18.0	19...	1025	5.5	21.0	15.5
NOV					JUN				
01...	1025	3.3	18.0	9.5	16...	1030	23	21.0	22.5
14...	1210	5.2	9.5	9.5	24...	1200	2.8	25.0	17.5
JAN , 1980					JUL				
08...	0930	4.1	2.0	3.0	17...	0910	2.3	30.0	28.5
FEB					AUG				
13...	0945	3.5	-.5	.5	05...	0935	2.2	29.5	24.5
APR					SEP				
08...	1440	5.7	20.0	15.5	17...	1135	2.0	25.5	17.0
10...	1310	14	22.0	17.0					
01483200 - BLACKBIRD C AT BLACKBIRD DE (LAT 39 21 58 LONG 075 40 10)									
OCT , 1979					JUN , 1980				
04...	0950	4.6	23.5	19.0	03...	0950	2.1	29.0	25.5
NOV					24...	1530	1.9	27.0	26.5
14...	0915	6.5	8.0	10.5	JUL				
JAN , 1980					17...	0820	1.3	30.0	28.0
07...	1110	3.9	3.0	2.0	AUG				
FEB					05...	0805	.65	27.5	25.0
13...	0830	2.3	-2.5	2.0	SEP				
MAR					08...	1000	.37	22.5	24.0
18...	1255	8.2	11.0	10.0	09...	0930	.21	22.0	23.5
APR									
10...	1155	65	20.5	14.0					

ST. JONES RIVER BASIN

01483700 - ST JONES R AT DOVER DE (LAT 39 09 49 LONG 075 31 10)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
01...	1115	25	20.5	20.5	30...	1415	150	12.5	14.5
NOV					MAY				
01...	1500	27	15.0	13.0	30...	1130	13	30.0	22.0
30...	1155	47	3.0	10.0	JUN				
DEC					03...	1110	17	29.0	26.5
31...	1140	28	6.0	5.0	JUL				
JAN , 1980					01...	1445	100	26.0	30.0
31...	1355	28	-4.0	1.0	30...	1000	461	26.5	26.0
FEB					SEP				
29...	1330	28	-4.5	3.0	02...	1000	6.3	29.0	27.0
MAR									
17...	1415	55	15.0	7.5					
31...	1435	192	7.0	10.0					

MURDERKILL RIVER BASIN

01484000 - MURDERKILL R NR FELTON DE (LAT 38 58 33 LONG 075 34 03)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
04...	1530	17	24.0	17.5	19...	0940	17	23.0	16.5
NOV					JUN				
14...	1505	35	7.5	10.5	26...	1000	5.6	22.0	19.0
JAN , 1980					AUG				
07...	1350	13	2.5	2.5	12...	1415	4.0	29.0	22.5
FEB					SEP				
20...	1430	13	13.0	6.5	10...	1535	3.3	26.0	20.5
MAR									
18...	1055	47	10.0	11.0					

MISPILLION RIVER BASIN

01484100 - BEAVERDAM B AT HOUSTON DE (LAT 38 54 20 LONG 075 30 49)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
09...	1330	3.5	20.5	15.0	15...	1400	4.5	20.0	15.5
23...	1130	3.9	24.5	15.5	JUN				
NOV					11...	1030	3.0	18.0	14.0
08...	1400	3.4	18.0	14.0	26...	1150	5.0	20.5	18.0
15...	1415	5.9	10.5	10.5	JUL				
DEC					15...	1045	1.8	28.0	17.0
21...	1410	3.8	3.0	8.0	21...	1445	.89	35.5	21.0
FEB , 1980					AUG				
20...	1115	3.5	12.0	9.0	11...	1015	1.6	28.0	19.0
MAR					SEP				
14...	1000	16	3.5	6.0	11...	1305	.63	25.5	17.0
APR									
03...	1435	7.8	16.5	15.0					

BROADKILL RIVER BASIN

01484270 - BEAVERDAM C NR MILTON DE (LAT 38 45 41 LONG 075 16 03)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
04...	1345	11	24.5	18.0	07...	1205	21	19.5	16.5
NOV					MAY				
27...	1355	15	23.5	13.5	16...	1445	17	21.0	18.5
DEC					JUN				
18...	1040	12	-.5	4.0	24...	1145	12	28.0	20.0
JAN , 1980					AUG				
08...	1210	13	2.5	6.0	18...	1330	8.6	22.0	17.0
FEB					SEP				
21...	1350	14	15.5	12.5	12...	1200	7.8	25.0	17.5
MAR									
11...	1320	12	7.5	13.0					

INDIAN RIVER BASIN

01484500 - STOCKLEY B AT STOCKLEY DE (LAT 38 38 19 LONG 075 20 31)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
04...	1125	3.3	20.0	16.5	29...	1045	36	14.0	14.0
NOV					MAY				
15...	1110	11	7.5	9.0	16...	1120	7.8	19.5	15.5
JAN , 1980					JUN				
08...	1100	6.2	3.0	5.5	24...	1350	3.5	26.5	19.0
FEB					AUG				
21...	1120	5.9	14.0	9.0	11...	1500	1.4	31.5	28.0
MAR					SEP				
14...	1200	23	6.0	7.5	18...	1330	1.4	24.5	20.0
APR									
07...	1100	17	18.5	13.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POCOMOKE RIVER BASIN

01485000 - POCOMOKE R NR WILLARDS, MD (LAT 38 23 20 LONG 075 19 30)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
15...	1145	131	12.0	11.0	12...	1100	61	26.0	16.5
NOV					JUN				
16...	1405	274	11.0	10.5	27...	1110	48	27.0	21.0
JAN , 1980					AUG				
11...	1100	78	15.5	6.0	18...	1110	7.8	21.0	21.0
FEB					SEP				
14...	1105	39	5.5	3.0	09...	1245	4.3	25.0	20.0
APR									
15...	1145	90	16.0	15.5					
29...	1340	655	15.5	14.5					

01485500 - NASSAWANGO C NR SNOW HILL, MD (LAT 38 13 44 LONG 075 28 19)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
17...	1405	69	18.5	11.5	12...	1305	30	26.0	17.5
NOV					JUN				
16...	1155	215	9.0	8.0	27...	1300	29	28.0	21.0
JAN , 1980					AUG				
09...	1350	71	1.5	1.5	18...	1140	6.8	20.0	19.5
FEB					SEP				
26...	1400	64	3.0	4.0	25...	1310	1.8	25.0	19.0
APR									
09...	1240	86	18.0	15.5					

MANOKIN RIVER BASIN

01486000 - MANOKIN B NR PRINCESS ANNE, MD (LAT 38 12 50 LONG 075 40 18)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
17...	1200	6.5	22.0	14.0	02...	1230	11	18.5	11.0
NOV					MAY				
20...	1210	7.6	23.0	11.0	14...	1140	2.9	28.5	20.5
JAN , 1980					JUN				
09...	1125	6.1	4.5	4.5	25...	1145	.82	30.5	23.0
FEB					SEP				
26...	1130	6.9	3.5	5.0	09...	1040	.21	23.5	21.0

NANTICOKE RIVER BASIN

01487000 - NANTICOKE R NR BRIDGEVILLE, DE (LAT 38 43 45 LONG 075 33 41)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					MAR , 1980				
11...	1120	273	10.5	9.5	17...	1130	144	15.0	11.0
NOV					APR				
27...	1215	152	14.0	13.5	08...	1000	168	21.5	14.5
DEC					AUG				
18...	1400	100	-1.5	4.5	11...	1140	42	29.0	23.0
FEB , 1980					SEP				
04...	1100	113	-2.5	3.0	18...	1145	59	24.0	21.0

01488500 - MARSHYHOPE C NR ADAMSVILLE DE (LAT 38 50 59 LONG 075 40 24)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
09...	1210	50	20.0	15.5	19...	1145	45	28.0	22.0
NOV					JUN				
21...	1305	59	21.5	12.0	05...	1430	29	26.0	24.5
JAN , 1980					27...	1500	48	33.0	28.5
07...	1105	42	3.5	2.5	AUG				
FEB					15...	1050	13	26.0	23.5
20...	1425	42	15.0	9.5	SEP				
MAR					10...	1330	11	24.0	21.6
14...	1020	318	3.0	5.5					

01489000 - FAULKNER B AT FEDERALSBURG, MD (LAT 38 42 44 LONG 075 47 34)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
09...	1045	18	19.5	15.0	15...	1245	8.8	17.5	19.0
NOV					JUN				
21...	1135	14	23.0	11.0	27...	1055	4.3	25.5	20.5
JAN , 1980					AUG				
10...	1310	8.0	1.5	3.0	14...	0950	3.7	26.0	21.5
FEB					SEP				
20...	1225	8.6	11.0	7.0	11...	1040	2.2	20.0	17.5

TRANSQUAKING RIVER BASIN

01490000 - CHICAMACOMICO R NR SALEM, MD (LAT 38 30 45 LONG 075 52 50)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
05...	1145	61	22.5	18.0	21...	1055	23	17.0	17.5
NOV					JUN				
23...	1105	22	21.5	12.5	26...	1250	7.9	22.0	24.0
JAN , 1980					JUL				
11...	1325	17	16.0	5.5	21...	1210	3.5	34.5	31.5
FEB					AUG				
28...	1225	19	-2.0	3.0	20...	1300	6.8	26.5	22.0
APR					SEP				
16...	1135	35	14.5	13.5	25...	1100	6.1	22.0	21.0

CHOPTANK RIVER BASIN

01491000 - CHOPTANK R NR GREENSBORO, MD (LAT 38 59 50 LONG 075 47 10)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
25...	1035	152	10.5	12.5	28...	1410	217	16.5	13.5
NOV					JUN				
26...	0955	115	19.5	16.0	23...	1305	39	27.5	21.0
DEC					30...	1025	58	24.0	24.0
26...	1020	169	8.0	9.0	JUL				
JAN , 1980					23...	1150	76	23.5	25.5
24...	1040	395	-5.0	1.0	AUG				
FEB					25...	0955	56	24.0	22.0
22...	0950	102	6.5	6.5	SEP				
MAR					17...	0835	21	20.5	19.5
18...	1345	220	7.0	12.0	24...	0940	22	19.0	21.5
26...	1030	629	8.0	8.0	25...	1505	51	24.0	20.5
APR					26...	1305	86	23.0	20.5
18...	1205	144	16.5	11.5	30...	0720	39	17.5	17.0
23...	1145	100	15.5	16.0					
28...	1035	283	15.0	13.5					

01492000 - BEAVERDAM B AT MATTHEWS, MD (LAT 38 48 40 LONG 075 58 15)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
11...	1335	27	10.5	10.5	03...	1145	8.6	27.5	12.0
NOV					21...	1255	4.4	20.0	17.5
14...	1210	17	12.0	10.0	MAY				
14...	1245	14	12.5	10.0	15...	1035	2.1	17.5	15.0
DEC					JUN				
11...	1125	4.8	12.5	5.0	05...	1210	1.1	22.0	18.0
11...	1320	4.7	17.5	7.0	27...	1330	1.2	28.0	22.0
JAN , 1980					AUG				
10...	1130	4.3	-.5	.5	14...	1400	.17	32.0	24.0
FEB					SEP				
06...	1110	3.3	-1.5	.0	10...	1450	.25	26.0	21.0
20...	1005	4.4	5.5	1.0					

CHESTER RIVER BASIN

01493000 - UNICORN B NR MILLINGTON, MD (LAT 39 14 59 LONG 075 51 40)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
19...	1045	32	15.5	14.0	11...	1040	150	14.5	15.5
NOV					MAY				
29...	1310	36	6.0	7.0	13...	1000	21	23.0	19.5
JAN , 1980					27...	1025	23	19.0	19.5
17...	1140	44	3.5	3.0	JUN				
FEB					13...	1230	16	24.0	21.0
22...	1345	21	9.0	7.5	JUL				
MAR					09...	1320	16	27.0	24.0
14...	1210	76	4.5	5.0	SEP				
31...	1115	72	6.0	10.0	09...	1150	10	25.0	25.5
APR									
10...	1035	295	21.0	15.5					

01493500 - MORGAN C NR KENNEDYVILLE, MD (LAT 39 16 48 LONG 076 00 56)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
10...	1110	37	5.5	9.5	22...	1225	9.4	22.0	14.5
10...	1300	57	3.0	8.5	MAY				
10...	1450	84	4.5	8.0	13...	1200	10	25.5	18.0
24...	1200	12	12.0	13.0	JUN				
25...	1210	10	14.5	9.5	25...	1110	5.6	26.0	19.5
DEC					AUG				
26...	1240	12	10.0	7.5	13...	1015	6.0	25.0	21.5
FEB , 1980					SEP				
22...	1110	13	7.0	4.5	09...	1300	3.7	21.0	19.8
MAR									
18...	1045	13	6.0	10.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

ELK RIVER BASIN

01495000 - BIG ELK C AT ELK MILLS, MD (LAT 39 39 26 LONG 075 49 20)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
09...	1010	59	19.5	18.0	02...	1520	125	14.5	12.0
NOV					MAY				
26...	1310	389	15.5	16.0	22...	0945	78	22.0	15.0
JAN , 1980					JUL				
15...	1030	74	9.0	6.0	07...	1440	32	27.0	23.0
FEB					AUG				
27...	1425	54	3.0	3.0	07...	1110	23	31.5	24.5
MAR					SEP				
14...	1110	240	--	1.0	12...	1450	16	24.0	20.5

01495800 - LONG C NR CHESAPEAKE CITY, MD (LAT 39 33 15 LONG 075 47 18)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
17...	1200	2.1	14.0	12.5	20...	1150	3.9	20.0	18.0
NOV					JUL				
29...	0915	6.1	4.0	7.0	02...	1345	1.5	28.5	25.0
JAN , 1980					17...	1300	.66	24.5	30.5
17...	0935	5.0	3.0	3.0	AUG				
FEB					14...	1130	.22	25.5	25.0
13...	1335	2.3	6.0	1.0					
APR									
11...	1235	18	18.5	16.5					

NORTHEAST RIVER BASIN

01496000 - NORTHEAST C AT LESLIE, MD (LAT 39 37 40 LONG 075 56 40)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
09...	1155	25	19.0	17.5	23...	0950	22	18.5	20.0
NOV					JUL				
28...	1355	36	16.0	11.0	08...	1105	12	18.5	19.5
FEB , 1980					AUG				
04...	1300	25	.0	.0	07...	1255	9.5	33.5	24.0
27...	1245	18	3.0	3.5	SEP				
APR					12...	1250	3.4	24.0	19.0
02...	1130	58	12.5	9.5					

PRINCIPIO CREEK BASIN

01496200 - PRINCIPIO C NR PRINCIPIO FURNACE, MD (LAT 39 37 34 LONG 076 02 27)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					MAR , 1980				
09...	1410	5.4	20.0	17.0	21...	1715	116	10.0	11.0
NOV					APR				
26...	1115	60	17.5	15.5	02...	1025	21	12.5	10.0
DEC					MAY				
05...	1020	8.8	8.5	3.5	23...	1415	11	24.5	21.0
JAN , 1980					JUL				
15...	1500	11	10.0	8.0	08...	1310	6.1	21.5	19.5
FEB					AUG				
04...	0915	8.5	-3.5	.0	07...	1445	3.7	33.0	25.0
27...	1125	7.7	4.5	2.5	SEP				
MAR					12...	1025	1.5	23.5	17.0
21...	1540	150	15.0	11.0					

SUSQUEHANNA RIVER BASIN

01580000 - DEER C AT ROCKS, MD (LAT 39 37 49 LONG 076 24 13)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
04...	1343	274	23.0	17.0	21...	1800	154	15.0	17.0
NOV					JUN				
19...	1630	136	14.0	9.0	03...	1300	132	25.0	20.5
DEC					JUL				
18...	1115	113	-1.0	1.0	15...	1000	78	24.0	21.0
JAN , 1980					AUG				
23...	1350	138	5.0	4.0	26...	1200	54	26.0	22.0
MAR									
13...	1230	98	-2.0	3.0					

BUSH RIVER BASIN

01581700 - WINTERS RN NR BENSON, MD (LAT 39 31 12 LONG 076 22 24)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
04...	1120	76	22.0	17.0	20...	1000	66	16.5	15.0
30...	1330	64	15.5	11.0	JUN				
NOV					03...	1030	46	24.5	20.0
19...	1245	60	22.0	9.0	JUL				
DEC					11...	1000	31	24.5	22.0
18...	1530	60	-2.0	.5	24...	1400	37	26.0	25.0
JAN , 1980					AUG				
23...	1100	62	5.0	4.0	26...	1430	19	29.0	25.0
MAR					SEP				
11...	1330	43	3.5	8.0	23...	1100	15	25.0	22.0
APR									
21...	1400	54	23.5	18.0					

GUNPOWDER RIVER BASIN

01582000 - LITTLE FALLS AT BLUE MOUNT, MD (LAT 39 36 16 LONG 076 37 16)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
05...	1320	180	20.0	17.0	22...	1530	86	17.5	15.5
12...	1030	220	10.5	10.0	JUN				
NOV					05...	1030	71	18.0	15.5
20...	1600	99	18.0	9.0	JUL				
DEC					16...	1030	46	25.0	22.0
19...	0930	78	-2.0	.5	AUG				
JAN , 1980					22...	1100	37	21.0	19.0
24...	1030	66	-5.0	1.0	SEP				
FEB					23...	1300	26	26.0	22.0
05...	1500	76	1.0	.5					
MAR									
12...	1430	58	2.0	6.0					

01583000 - SLADE RN NR GLYNDON, MD (LAT 39 29 40 LONG 076 47 45)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
05...	1125	5.3	17.0	15.0	01...	1015	5.6	13.5	8.0
18...	1525	5.0	26.5	15.0	14...	1050	3.8	9.0	10.0
NOV					JUN				
13...	1147	4.9	9.0	9.0	02...	1030	3.1	28.0	18.0
DEC					JUL				
27...	0932	3.2	3.0	4.0	07...	1115	2.1	23.0	19.0
JAN , 1980					AUG				
21...	1033	3.1	.0	3.0	18...	1020	1.5	21.0	17.0
MAR									
03...	1205	2.8	-7.0	2.0					

01583500 - WESTERN RN AT WESTERN RUN, MD (LAT 39 30 38 LONG 076 40 37)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
09...	1100	219	18.0	16.0	22...	0930	88	16.5	12.0
31...	1630	118	11.5	10.5	MAY				
NOV					20...	1530	107	18.0	17.0
20...	0930	103	8.0	7.5	JUN				
DEC					04...	1400	83	22.0	20.5
19...	1600	83	1.5	2.0	JUL				
JAN , 1980					14...	1400	52	29.0	23.5
25...	0845	82	-2.5	1.0	AUG				
FEB					25...	1030	34	22.0	20.5
05...	1600	72	1.0	.5					
MAR									
12...	1030	63	2.0	4.0					

01584050 - LONG GREEN C AT GLEN ARM, MD (LAT 39 27 17 LONG 076 28 45)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					JUN , 1980				
03...	1355	29	23.0	19.0	06...	1005	11	16.5	14.0
DEC					JUL				
17...	1200	11	.0	3.0	08...	1500	11	20.0	18.0
JAN , 1980					24...	1200	8.8	24.0	21.0
29...	1030	11	1.0	4.0	AUG				
MAR					19...	1300	90	22.0	20.0
07...	1515	8.9	10.0	8.0	SEP				
APR					23...	0930	4.0	23.0	20.0
14...	1330	16	9.0	10.0					
14...	1615	19	7.5	10.0					

GUNPOWDER RIVER BASIN--CONTINUED

01585100 - WHITEMARSH RN AT WHITE MARSH, MD (LAT 39 22 15 LONG 076 26 46)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
02...	1330	12	25.0	21.0	21...	1000	5.3	17.5	17.0
NOV					JUN				
14...	1530	9.2	9.0	10.0	02...	1200	3.6	29.5	27.0
DEC					JUL				
14...	1550	6.2	5.0	6.0	09...	1400	2.6	28.5	30.0
JAN , 1980					AUG				
22...	1400	7.5	5.0	3.5	20...	1200	2.6	26.0	25.0
MAR									
04...	1000	8.8	7.0	1.0					

BACK RIVER BASIN

01585200 - WB HERRING RN AT IDLEWYLDE, MD (LAT 39 22 25 LONG 076 35 35)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
01...	1525	6.3	23.0	20.0	15...	1415	1.9	11.5	13.0
NOV					JUN				
15...	1330	1.6	11.0	9.0	09...	1030	.97	18.5	18.0
DEC					JUL				
20...	1630	1.2	.5	2.5	08...	1000	23	18.5	20.0
JAN , 1980					AUG				
31...	1315	1.3	-1.5	2.0	19...	1015	6.4	23.0	21.5
MAR									
03...	1440	1.8	2.0	2.5					

01585300 - STEMMERS RN AT ROSSVILLE, MD (LAT 39 20 28 LONG 076 29 17)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
03...	1030	18	20.0	19.0	18...	1030	2.4	14.0	13.0
NOV					JUN				
16...	1245	2.3	12.0	11.0	02...	1645	1.4	28.5	17.0
DEC					JUL				
20...	1430	1.8	.5	2.5	09...	1600	1.1	29.0	31.0
JAN , 1980					AUG				
31...	1115	1.9	-3.0	1.0	01...	1430	1.1	33.0	32.0
MAR					25...	1630	.30	33.5	31.0
05...	1045	7.1	8.5	1.5					

01585400 - BRIEN RN AT STEMMERS RUN, MD (LAT 39 20 01 LONG 076 28 23)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
02...	1515	2.8	25.0	20.0	18...	1430	.75	19.0	15.5
NOV					JUN				
14...	1305	2.4	9.0	11.0	02...	1440	.62	26.0	20.0
JAN , 1980					JUL				
22...	1545	3.5	5.5	5.5	09...	0930	.53	24.0	18.0
MAR					AUG				
04...	1400	.82	10.0	5.0	20...	1515	.51	27.0	22.0

PATAPSCO RIVER BASIN

01585500 - CRANBERRY R NR WESTMINSTER, MD (LAT 39 35 35 LONG 076 58 05)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					MAR , 1980				
04...	1655	6.6	18.5	16.0	03...	1540	6.1	3.0	2.0
NOV					APR				
14...	0857	4.3	5.0	8.0	15...	1100	6.5	8.0	10.0
DEC					JUN				
27...	1200	2.9	4.0	4.5	03...	1015	4.6	27.0	16.0
JAN , 1980									
22...	1000	2.6	.0	2.0					

01586000 - NB PATAPSCO R AT CEDARHURST, MD (LAT 39 30 00 LONG 076 53 00)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)
OCT , 1979					JUN , 1980				
05...	0925	141	16.0	15.0	02...	1310	72	28.0	20.5
NOV					30...	1445	57	26.0	22.5
13...	1537	87	8.0	9.5	JUL				
JAN , 1980					07...	1405	41	31.0	21.0
03...	1100	45	2.5	3.0	AUG				
21...	1403	65	4.0	3.0	18...	1252	26	20.5	19.0
APR									
01...	1335	154	16.5	9.5					
14...	1510	104	12.0	11.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
PATAPSCO RIVER BASIN--CONTINUED									
01587500 - SB PATAPSCO R AT HENRYTON, MD (LAT 39 21 05 LONG 076 54 50)									
OCT , 1979					MAR , 1980				
11...	1315	340	13.0	10.0	06...	1000	76	3.0	4.0
NOV					APR				
27...	1340	113	13.5	11.0	16...	1430	124	7.0	9.0
DEC					MAY				
13...	1115	90	10.0	8.0	29...	1130	105	21.0	17.0
JAN , 1980					JUL				
25...	1430	84	.5	1.5	10...	1345	55	27.0	23.5
01589000 - PATAPSCO R AT HOLLOFIELD, MD (LAT 39 18 36 LONG 076 47 34)									
OCT , 1979					APR , 1980				
31...	1130	250	16.5	10.0	16...	1205	355	8.5	12.0
DEC					MAY				
12...	1415	147	21.0	7.0	28...	1530	260	26.5	19.5
JAN , 1980					JUL				
25...	1230	160	1.0	1.0	10...	1030	100	25.0	22.0
MAR					AUG				
06...	1300	151	9.0	6.0	27...	1100	42	27.5	24.5
01589100 - EB HERBERT RN AT ARBUTUS, MD (LAT 39 14 24 LONG 076 41 33)									
NOV , 1979					MAY , 1980				
28...	1030	1.8	18.5	11.0	27...	1400	2.1	24.0	18.0
DEC					JUL				
12...	1000	1.4	13.0	7.0	07...	1030	1.2	20.0	20.0
MAR , 1980					AUG				
21...	1000	28	14.0	10.5	18...	1015	1.0	19.5	20.0
APR									
16...	0930	1.9	9.5	9.5					
01589300 - GWYNNS FALLS AT VILLA NOVA, MD (LAT 39 20 45 LONG 076 44 01)									
OCT , 1979					APR , 1980				
11...	1110	111	10.0	10.0	17...	1345	36	12.5	11.5
31...	1230	38	17.5	10.0	MAY				
NOV					29...	1600	36	24.0	20.0
21...	1300	36	15.0	9.5	JUL				
DEC					07...	1530	20	25.0	23.0
13...	1455	98	7.5	8.0	AUG				
JAN , 1980					18...	1245	13	20.0	20.0
28...	1230	31	2.0	3.0					
MAR									
05...	1650	58	10.0	4.5					
01589330 - DEAD RN AT FRANKLINTOWN, MD (LAT 39 18 40 LONG 076 43 02)									
NOV , 1979					APR , 1980				
21...	1500	2.1	16.0	11.0	17...	1030	2.8	12.0	9.5
DEC					MAY				
12...	1605	2.0	16.0	8.5	28...	0930	2.0	21.0	16.0
MAR , 1980									
06...	1545	2.8	8.0	8.5					
01589440 - JONES FALLS AT SORRENTO, MD (LAT 39 23 30 LONG 076 39 42)									
OCT , 1979					MAR , 1980				
09...	1315	68	18.0	17.0	07...	1300	27	12.5	6.5
31...	1500	45	13.0	11.5	24...	1400	49	9.0	7.0
NOV					APR				
16...	1500	46	10.0	9.0	23...	1100	37	17.0	13.0
DEC					JUN				
20...	1130	34	-1.0	3.0	06...	1400	32	20.0	15.0
JAN , 1980					JUL				
28...	1530	33	3.0	4.5	14...	1030	19	24.0	19.0
FEB					AUG				
06...	0930	28	-4.0	.5	25...	1315	12	23.0	21.0

SOUTH RIVER BASIN

01590500 - BACON RIDGE B AT CHESTERFIELD, MD (LAT 39 00 07 LONG 076 36 53)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979 19...	1555	9.4	14.0	7.5	APR , 1980 14...	1407	12	13.5	12.0
DEC 27...	1445	8.1	2.5	4.5	JUN 04...	1010	11	19.0	16.5
JAN , 1980 25...	0950	9.9	.0	1.5	JUL 14...	1436	3.7	29.0	20.5
MAR 06...	1220	11	6.5	5.5	AUG 26...	1420	3.3	30.5	20.0

PATUXENT RIVER BASIN

01591000 - PATUXENT R NR UNITY, MD (LAT 39 14 18 LONG 077 03 23)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979 19...	1600	49	10.0	9.5	APR , 1980 21...	1417	57	21.0	11.5
JAN , 1980 28...	1520	41	2.0	4.0	MAY 29...	1400	62	20.0	17.0
MAR 12...	1405	29	2.0	5.0	JUL 16...	1315	22	39.0	19.0

01591350 - CATTAIL C NR COOKSVILLE, MD (LAT 39 18 50 LONG 077 03 15)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979 19...	1350	12	21.0	9.5	MAY , 1980 29...	1615	10	21.0	19.5
DEC 12...	1117	11	15.5	8.0	JUN 27...	1140	8.0	28.0	17.5
					27...	1425	6.8	30.0	20.0
JAN , 1980 28...	1046	9.8	1.0	3.0	AUG 08...	1330	4.0	31.0	22.0
MAR 12...	1655	7.4	1.0	3.0	SEP 03...	1330	2.8	27.0	22.5
APR 21...	1046	12	19.0	9.0					

01591400 - CATTAIL C AT ROXBURY MILLS RD AT ROXBURY MILLS (LAT 39 15 27 LONG 077 03 13)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979 19...	1435	32	19.0	9.5	MAR , 1980 12...	1519	20	2.0	4.0
DEC 12...	1317	28	18.5	8.0	APR 21...	1405	32	23.0	16.5
JAN , 1980 28...	1325	26	4.5	4.0	JUL 23...	1445	21	26.0	21.0

01591700 - HAWLINGS R NR SANDY SPRING, MD (LAT 39 10 29 LONG 077 01 22)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979 20...	1215	35	15.0	8.5	MAR , 1980 12...	1157	23	2.0	4.0
DEC 13...	1057	35	7.0	8.0	APR 24...	1222	30	21.0	11.0
JAN , 1980 30...	1336	29	-2.5	.0	JUL 15...	1220	15	35.0	20.0

01592500 - PATUXENT R NR LAUREL, MD (LAT 39 06 56 LONG 076 52 27)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979 05...	1225	30	16.0	11.5	JUL , 1980 18...	1200	18	29.5	19.5
JAN , 1980 29...	1155	17	5.0	3.5	AUG 27...	1245	21	31.5	24.5

01593500 - L PATUXENT R AT GUILFORD, MD (LAT 39 10 04 LONG 076 51 07)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979 02...	1325	152	22.0	17.0	APR , 1980 15...	1030	105	12.0	12.5
NOV 21...	1300	43	15.5	9.0	JUN 05...	1050	41	20.5	19.5
DEC 13...	1605	87	5.5	7.5	JUL 21...	1010	14	30.5	27.0
JAN , 1980 21...	1120	47	5.5	3.5	AUG 26...	1730	9.6	28.5	23.5
MAR 10...	1215	38	19.5	7.5					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
PATUXENT RIVER BASIN--CONTINUED									
01594000 - L PATUXENT R AT SAVAGE, MD (LAT 39 08 00 LONG 076 48 58)									
NOV , 1979					JUN , 1980				
21...	1505	124	16.0	9.5	05...	1700	108	28.5	21.0
DEC					09...	1400	83	22.5	20.5
13...	1330	133	17.0	17.5	JUL				
JAN , 1980					21...	1215	40	34.5	29.0
21...	1430	136	6.5	3.5	AUG				
MAR					27...	1700	26	25.5	28.0
10...	1428	105	14.0	9.0					
APR									
17...	1130	126	10.5	10.5					
01594440 - PATUXENT R NR BOWIE, MD (LAT 38 57 21 LONG 076 41 36)									
AUG , 1980									
28...	1245	106	32.0	24.0					
POTOMAC RIVER BASIN									
01595000 - NB POTOMAC R AT STEYER, MD (LAT 39 18 07 LONG 079 18 26)									
OCT , 1979					JUN , 1980				
16...	1335	261	13.0	9.0	03...	1420	258	22.0	19.0
NOV					11...	1430	270	16.0	13.5
20...	1610	94	15.0	6.5	JUL				
JAN , 1980					22...	1405	96	22.0	23.0
02...	1230	108	-3.5	.0	AUG				
30...	1515	79	-3.0	.0	26...	1320	105	23.0	19.0
MAR					27...	1230	103	23.0	19.0
17...	1030	326	4.0	4.0					
01595500 - NB POTOMAC R AT KITZMILLER, MD (LAT 39 23 38 LONG 079 10 55)									
OCT , 1979					JUN , 1980				
02...	1005	227	17.0	15.5	03...	1215	666	23.0	19.0
17...	1115	749	12.0	10.0	JUL				
29...	1100	305	10.0	6.5	01...	1145	150	23.0	20.0
DEC					31...	1155	214	28.0	22.0
03...	1055	151	-3.0	.5	AUG				
JAN , 1980					08...	1115	119	31.0	24.0
03...	1130	210	-.5	.5	SEP				
FEB					03...	1300	139	27.0	25.0
04...	1130	151	-8.0	.0	09...	1045	90	23.0	19.0
01595800 - NB POTOMAC R AT BARNUM, WV (LAT 39 26 44 LONG 079 06 39)									
OCT , 1979					APR , 1980				
17...	1510	916	12.0	11.0	18...	0930	1040	13.0	7.5
NOV					JUN				
21...	1350	260	10.0	8.0	09...	1200	923	15.0	16.0
21...	1515	284	10.0	8.0	JUL				
JAN , 1980					22...	1150	132	26.0	26.5
08...	1115	254	1.0	1.0	AUG				
FEB					27...	1045	263	22.0	22.0
05...	1130	172	-1.5	.0					
MAR									
17...	1420	894	6.0	4.0					
01596500 - SAVAGE R NR BARTON, MD (LAT 39 34 05 LONG 079 06 10)									
OCT , 1979					JUN , 1980				
11...	1000	285	4.0	8.0	04...	1245	55	14.0	16.0
NOV					JUL				
27...	1440	96	12.0	8.0	18...	1230	13	22.5	20.0
JAN , 1980					AUG				
07...	1130	38	3.0	.5	22...	1210	21	18.0	18.0
29...	1615	28	-6.0	.0					
MAR									
11...	1220	124	-5.0	2.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01597000 - CRABTREE C NR SWANTON, MD (LAT 39 30 00 LONG 079 09 35)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					MAR , 1980				
11...	1220	144	6.0	8.0	11...	1455	47	-2.0	3.0
NOV					JUN				
21...	1700	12	10.5	7.5	04...	1050	27	15.0	13.5
JAN , 1980					JUL				
07...	1600	16	1.0	2.0	23...	1305	4.9	21.5	19.0
29...	1430	12	-4.0	1.0	25...	1500	3.6	28.0	19.5
FEB					AUG				
06...	1230	7.2	-2.5	.0	22...	1345	20	19.0	16.0
14...	1230	7.1	10.5	.5	29...	1350	6.9	27.0	21.0

01597500 - SAVAGE R BL SAVAGE R DAM NR BLOOMINGTON, MD (LAT 39 30 05 LONG 079 07 25)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
01...	1250	104	21.0	10.0	09...	1200	104	17.5	12.0
02...	1255	104	19.0	14.5	JUN				
JAN , 1980					11...	0935	443	18.0	16.0
03...	1500	86	2.0	2.5	JUL				
FEB					01...	1400	31	27.0	23.5
04...	1530	39	-6.0	1.5	23...	1345	24	22.5	18.5
14...	1230	38	1.0	3.0	25...	1520	18	23.0	17.5
MAR					AUG				
05...	1630	85	4.0	2.0	26...	1445	104	28.0	9.5
19...	1120	1010	6.0	4.0	SEP				
19...	1250	2100	7.0	4.0	03...	1120	112	21.0	10.0
APR									
03...	1230	559	14.5	6.5					

01598500 - NB POTOMAC R AT LUKE, MD (LAT 39 28 45 LONG 079 03 55)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
02...	1455	407	21.0	18.0	03...	1240	1940	13.5	10.0
DEC					MAY				
04...	0930	542	6.0	.5	02...	1300	2560	21.5	12.5
JAN , 1980					JUN				
03...	1610	394	1.0	2.5	17...	1015	2070	14.0	14.5
18...	1130	877	4.5	4.0	JUL				
FEB					01...	0955	260	15.0	20.0
05...	1430	358	1.5	.5	SEP				
MAR					03...	1400	235	29.0	23.5
06...	1300	1910	5.0	2.5					

01599000 - GEORGES C AT FRANKLIN, MD (LAT 39 29 38 LONG 079 02 42)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
01...	1110	40	17.5	16.5	09...	1330	90	15.0	10.0
18...	1150	80	14.0	11.0	JUN				
29...	1450	47	18.0	7.5	02...	1425	100	28.0	17.0
NOV					10...	1020	516	19.5	15.0
15...	1330	46	10.0	8.0	JUL				
JAN , 1980					01...	1505	29	27.0	22.0
03...	1320	58	1.0	3.0	31...	1420	22	28.0	23.0
FEB					AUG				
06...	1445	39	1.5	.5	26...	1400	21	29.0	22.5
MAR					SEP				
06...	1115	80	1.0	2.0	10...	1710	17	21.0	21.0
28...	1415	114	14.5	6.5					

01600000 - NB POTOMAC R AT PINTO, MD (LAT 39 33 59 LONG 078 50 25)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
15...	1500	2250	15.0	13.0	02...	1100	4640	15.5	7.5
DEC					MAY				
05...	1400	651	14.0	3.5	14...	1430	802	16.0	18.0
JAN , 1980					JUN				
03...	1150	741	1.0	3.0	10...	1500	1960	19.5	17.0
FEB					JUL				
07...	1325	300	1.5	2.0	02...	1120	240	25.0	24.0
MAR									
28...	1030	1060	16.0	8.0					

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
POTOMAC RIVER BASIN--CONTINUED									
01601500 - WILLS C NR CUMBERLAND, MD (LAT 39 40 07 LONG 078 47 18)									
DEC , 1979					JUN , 1980				
13...	1120	273	5.0	6.5	10...	1340	296	19.5	16.0
17...	1300	406	-5.0	1.0	AUG				
FEB , 1980					08...	1000	68	28.0	21.0
28...	1445	315	1.0	1.5	26...	0915	59	22.0	19.0
MAY									
29...	1400	324	26.0	17.0					
01603000 - NB POTOMAC R NR CUMBERLAND, MD (LAT 39 37 16 LONG 078 46 24)									
OCT , 1979					JUL , 1980				
02...	1100	656	19.0	19.0	02...	0930	389	24.0	22.5
30...	1300	749	13.0	7.0	25...	1115	427	25.0	24.5
DEC					AUG				
06...	1300	784	10.0	4.5	04...	1025	418	23.0	25.0
JAN , 1980					26...	1100	600	26.0	23.0
03...	0905	1130	-2.0	2.5	SEP				
FEB					05...	1025	600	22.0	23.5
07...	0900	469	-4.5	.5	12...	1100	260	16.0	19.5
MAR									
10...	1030	6250	4.0	5.0					
25...	1450	3060	4.0	7.0					
01603500 - EVITTS C NR CENTERVILLE, PA (LAT 39 47 23 LONG 078 38 48)									
OCT , 1979					APR , 1980				
11...	1100	66	6.5	9.0	18...	1135	79	12.0	9.0
19...	1030	37	12.0	10.0	MAY				
NOV					28...	1100	34	23.0	15.0
23...	1125	22	14.0	8.0	JUL				
DEC					10...	1015	34	23.5	18.0
17...	1600	25	-6.0	1.0	AUG				
JAN , 1980					08...	1430	12	26.0	20.5
22...	1510	39	4.5	1.0	SEP				
FEB					17...	0930	5.0	20.0	18.0
28...	1240	25	-3.0	1.0					
01609000 - TOWN C NR OLDTOWN, MD (LAT 39 33 12 LONG 078 33 19)									
OCT , 1979					APR , 1980				
11...	1435	496	13.0	10.5	18...	1005	361	8.0	9.0
DEC					JUL				
20...	1500	118	-3.0	2.0	10...	1215	129	25.5	19.0
JAN , 1980					AUG				
22...	1000	217	4.5	1.5	08...	1400	23	32.0	29.0
FEB									
26...	1120	105	-3.0	2.0					
01610000 - POTOMAC R AT PAW PAW, WV (LAT 39 32 13 LONG 078 27 28)									
OCT , 1979					JUL , 1980				
09...	1525	8050	2.0	4.0	24...	1400	1950	31.0	26.0
JAN , 1980									
22...	1430	5820	3.0	4.0					
01613000 - POTOMAC R AT HANCOCK, MD (LAT 39 41 49 LONG 078 10 39)									
OCT , 1979					JUN , 1980				
09...	1010	8930	19.0	16.0	13...	1505	3840	27.0	20.5
JAN , 1980					JUL				
22...	1120	8930	2.0	3.5	24...	1110	1570	29.0	27.0
01614500 - CONOCOCHEAGUE C AT FAIRVIEW, MD (LAT 39 42 29 LONG 077 50 00)									
OCT , 1979					APR , 1980				
12...	1220	1260	11.0	10.0	16...	1225	2350	10.0	10.0
NOV					MAY				
20...	1410	487	16.0	9.0	28...	1400	796	25.0	16.0
JAN , 1980					AUG				
23...	1315	582	-2.0	4.0	14...	1130	194	28.0	23.0
FEB									
22...	1430	303	1.0	2.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01617800 - MARSH RUN AT GRIMES, MD (LAT 39 30 53 LONG 077 46 38)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
03...	1025	46	17.0	16.0	15...	1340	24	9.0	10.0
NOV					MAY				
20...	1115	16	14.0	9.5	27...	1945	17	21.0	16.0
DEC					JUL				
19...	1115	13	.0	3.0	11...	1110	8.4	26.0	22.0
FEB , 1980									
20...	1255	9.9	10.0	4.0					
29...	1430	9.6	-6.0	1.0					

01618000 - POTOMAC R AT SHEPHERDSTOWN, WV (LAT 39 26 04 LONG 077 48 07)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					MAY , 1980				
12...	1530	33400	11.5	11.0	27...	1030	13400	25.0	16.0
JAN , 1980					AUG				
24...	1330	9290	-1.5	2.5	15...	1545	1590	30.0	24.0
MAR									
31...	1030	22000	8.0	8.0					

01619000 - ANTIETAM C NR WAYNESBORO, PA (LAT 39 42 59 LONG 077 36 28)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					FEB , 1980				
03...	1555	508	20.0	17.0	27...	1200	73	-2.0	2.0
NOV					APR				
19...	1130	120	14.0	8.0	15...	1200	284	9.0	11.0
DEC					MAY				
18...	1205	89	-3.0	1.5	28...	0900	145	19.5	14.0
JAN , 1980					JUL				
23...	1700	125	-1.0	5.0	14...	1305	57	28.0	20.0
FEB									
20...	1045	71	6.0	3.5					

01619500 - ANTIETAM C NR SHARPSBURG, MD (LAT 39 27 01 LONG 077 43 52)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
03...	1110	854	18.0	16.0	15...	1545	719	11.0	10.0
NOV					MAY				
19...	1535	350	16.0	9.0	27...	1445	419	24.0	17.0
DEC					JUL				
18...	1525	279	-1.0	2.5	31...	1130	173	27.0	22.0
JAN , 1980					AUG				
24...	1510	353	-3.0	2.0	19...	1320	165	27.0	20.0
FEB									
29...	1130	213	-7.0	1.0					

01637500 - CATOCTIN C NR MIDDLETOWN, MD (LAT 39 25 35 LONG 077 33 25)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
02...	1550	189	22.5	18.0	18...	1040	140	10.5	9.0
NOV					JUN				
16...	1010	74	8.0	6.0	05...	1200	53	17.5	17.0
MAR , 1980					JUL				
05...	1230	47	6.5	.5	10...	1435	47	28.0	24.0

01639000 - MONOCACY R AT BRIDGEPORT, MD (LAT 39 40 43 LONG 077 14 06)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					JUN , 1980				
04...	1140	442	18.0	16.0	03...	1600	98	25.0	23.5
NOV					JUL				
14...	1630	304	8.0	9.0	09...	1615	25	28.0	23.5
DEC					AUG				
31...	1430	121	7.0	3.5	19...	1505	12	26.0	23.5

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
POTOMAC RIVER BASIN--CONTINUED									
01639500 - B PIPE C AT BRUCEVILLE, MD (LAT 39 36 45 LONG 077 14 10)									
OCT , 1979					JUN , 1980				
04...	1425	315	19.5	16.0	03...	1405	102	30.0	22.5
NOV					JUL				
14...	1315	152	8.0	9.0	03...	1305	62	28.0	24.0
DEC					09...	1510	60	32.0	24.0
31...	1100	77	5.0	1.0	AUG				
JAN , 1980					19...	1325	40	30.0	21.0
22...	1340	115	3.0	2.5					
APR									
15...	1450	230	9.5	9.5					
01640500 - OWENS C AT LANTZ, MD (LAT 39 40 36 LONG 077 27 50)									
OCT , 1979					APR , 1980				
04...	0920	37	--	13.0	16...	1030	24	5.0	9.0
NOV					JUN				
15...	1246	9.0	4.0	5.5	04...	0945	9.4	20.5	17.0
MAR , 1980									
06...	1425	5.5	7.0	4.0					
01641000 - HUNTING C AT JIMTOWN, MD (LAT 39 35 40 LONG 077 23 50)									
OCT , 1979					MAR , 1980				
03...	1730	112	18.0	16.5	07...	1145	14	10.0	4.0
NOV					APR				
15...	1010	27	4.0	6.0	30...	1110	65	12.0	11.0
DEC					JUL				
20...	1248	21	-3.0	.0	09...	1315	8.4	28.0	22.0
JAN , 1980									
23...	1200	31	1.0	4.0					
01641500 - FISHING C NR LEWISTOWN, MD (LAT 39 31 35 LONG 077 28 00)									
OCT , 1979					APR , 1980				
03...	1515	42	17.5	14.0	17...	1240	31	11.5	8.5
JAN , 1980					JUL				
23...	1503	18	-1.0	4.0	03...	1100	6.4	22.0	16.0
MAR					21...	1355	3.8	30.5	20.5
06...	1144	7.0	3.0	4.0					
01642500 - LINGANORE C NR FREDERICK, MD (LAT 39 24 55 LONG 077 20 00)									
NOV , 1979					APR , 1980				
16...	1524	110	11.0	9.0	18...	1520	153	18.5	10.5
DEC					JUN				
17...	1100	64	.0	.0	06...	1300	92	20.0	21.0
JAN , 1980					JUL				
25...	1220	90	-3.0	3.0	21...	1000	28	31.0	27.0
MAR									
04...	1327	81	12.0	4.0					
01643000 - MONOCACY R AT JUG BRIDGE NR FREDERICK, MD (LAT 39 23 16 LONG 077 22 48)									
NOV , 1979					MAR , 1980				
16...	1300	980	8.0	6.5	04...	1651	396	7.5	2.0
DEC					JUN				
17...	1455	564	-2.5	2.5	13...	1240	524	22.0	18.5
JAN , 1980					JUL				
25...	1530	769	-1.0	1.0	21...	1205	174	34.0	25.0
01643500 - BENNETT C AT PARK MILLS, MD (LAT 39 17 40 LONG 077 24 30)									
OCT , 1979					MAR , 1980				
03...	0940	323	16.0	16.0	05...	1615	73	5.0	.5
18...	1230	156	18.0	12.0	APR				
NOV					07...	1445	106	18.0	11.5
21...	1400	84	19.0	9.0	MAY				
DEC					23...	1125	124	28.0	15.0
18...	1610	61	2.0	.0	27...	1215	115	24.5	14.0
JAN , 1980					JUL				
24...	1445	83	-5.0	.0	14...	1200	28	34.0	23.0
FEB									
07...	1225	62	-1.0	.0					

POTOMAC RIVER BASIN--CONTINUED

01645000 - SENECA C AT DAWSONVILLE, MD (LAT 39 07 41 LONG 077 20 13)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979					MAR , 1980				
26...	1045	222	18.0	15.0	11...	1227	95	5.0	8.0
DEC					APR				
14...	1330	130	5.0	6.0	23...	1130	123	18.5	15.0
JAN , 1980					MAY				
29...	1330	120	2.0	3.5	23...	1545	159	24.0	18.5
FEB					JUL				
25...	1245	103	6.0	6.5	14...	1535	64	29.0	22.5

01645200 - WATTS B AT ROCKVILLE, MD (LAT 39 05 03 LONG 077 10 38)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					JAN , 1980				
02...	0920	14	18.0	18.0	29...	1052	3.2	1.0	3.5
NOV					MAR				
26...	1400	10	21.0	17.5	10...	1155	2.6	19.0	8.0
DEC					APR				
14...	1127	3.4	5.5	8.0	22...	1103	2.9	20.0	13.5

01648000 - ROCK C AT SHERRILL DR WASH, DC (LAT 38 58 21 LONG 077 02 25)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979					APR , 1980				
23...	1105	57	15.5	9.5	17...	1412	78	15.0	13.0
DEC					JUN				
28...	1145	50	3.0	2.5	03...	1200	61	26.5	22.0
JAN , 1980					JUL				
30...	1105	47	-3.0	.5	11...	1230	43	28.0	23.5
MAR					AUG				
03...	1315	51	1.5	.5	22...	1355	20	24.0	21.0

01649500 - NE B ANACOSTIA R AT RIVERDALE, MD (LAT 38 57 37 LONG 076 55 34)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979					APR , 1980				
23...	1505	55	19.0	13.0	18...	1525	68	20.0	18.5
DEC					29...	1430	311	14.5	14.5
20...	1025	46	-.5	1.5	JUN				
JAN , 1980					02...	1140	43	28.5	24.0
17...	1230	53	7.0	3.5	JUL				
29...	1455	54	4.0	4.5	10...	1000	206	22.0	29.5
MAR					AUG				
20...	1025	71	9.5	7.0	21...	1730	25	24.5	24.5

01650500 - NW B ANACOSTIA R NR COLESVILLE, MD (LAT 39 03 55 LONG 077 01 48)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979					JUN , 1980				
13...	1610	35	8.0	9.5	02...	1640	16	25.0	21.5
DEC					JUL				
20...	1630	19	-.5	2.0	11...	1015	13	27.5	21.0
JAN , 1980					AUG				
30...	1535	19	-1.5	1.0	25...	1530	5.2	32.0	22.0
APR									
17...	1650	23	12.0	12.5					

01651000 - NW B ANACOSTIA R NR HYATTSVILLE, MD (LAT 38 57 09 LONG 076 58 00)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979					APR , 1980				
23...	1325	37	19.0	12.5	18...	1245	44	17.0	14.5
DEC					JUN				
20...	1310	31	1.0	1.5	02...	1505	33	29.0	26.0
JAN , 1980					JUL				
29...	1745	32	-1.0	2.5	10...	1350	54	33.0	28.0
MAR					AUG				
04...	1745	48	1.5	2.0	25...	1210	14	30.0	28.5

01653600 - PISCATAWAY C AT PISCATAWAY, MD (LAT 38 42 20 LONG 076 58 00)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979					MAY , 1980				
16...	1510	55	9.5	9.0	27...	1630	25	21.5	16.5
DEC					JUL				
20...	1355	32	2.0	1.5	09...	1530	14	29.0	21.0
JAN , 1980					AUG				
24...	1455	63	.5	1.5	08...	1520	1.8	23.5	22.0
MAR									
05...	1435	79	15.5	1.5					
23...	1430	35	22.5	15.0					

POTOMAC RIVER BASIN--CONTINUED

01661050 - ST CLEMENT C NR CLEMENTS, MD (LAT 38 20 00 LONG 076 43 31)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
15...	1130	33	12.0	8.0	22...	1630	20	22.0	16.5
NOV					MAY				
15...	1650	31	7.5	7.0	28...	1745	11	19.5	17.5
DEC					JUL				
18...	1510	25	1.0	1.0	08...	1540	2.2	19.5	20.5
JAN , 1980					AUG				
23...	1540	62	3.0	5.0	19...	1800	.99	24.5	21.5

01661500 - ST MARYS R AT GREAT MILLS, MD (LAT 38 14 36 LONG 076 30 13)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
DEC , 1979					APR , 1980				
18...	1000	24	1.5	.0	22...	0930	20	15.0	13.0
JAN , 1980					MAY				
23...	0955	99	4.0	5.0	29...	0945	9.9	21.0	18.0
MAR					AUG				
12...	0915	11	3.0	4.5	19...	1255	3.8	21.5	21.0

01653600 - PISCATAWAY C AT PISCATAWAY, MD (LAT 38 42 20 LONG 076 58 00)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
NOV , 1979					MAR , 1980				
16...	1510	55	9.5	9.0	05...	1435	79	15.5	1.5
DEC					23...	1430	35	22.5	15.0
20...	1355	32	2.0	1.5	MAY				
JAN , 1980					27...	1630	25	21.5	16.5
24...	1455	63	.5	1.5					

01661050 - ST CLEMENT C NR CLEMENTS, MD (LAT 38 20 00 LONG 076 43 31)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
15...	1130	33	12.0	8.0	22...	1630	20	22.0	16.5
NOV					MAY				
15...	1650	31	7.5	7.0	28...	1745	11	19.5	17.5
DEC									
18...	1510	25	1.0	1.0					

01661500 - ST MARYS R AT GREAT MILLS, MD (LAT 38 14 36 LONG 076 30 13)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
DEC , 1979					APR , 1980				
18...	1000	24	1.5	.0	22...	0930	20	15.0	13.0
JAN , 1980					MAY				
23...	0955	99	4.0	5.0	29...	0945	9.9	21.0	18.0
MAR									
12...	0915	11	3.0	4.5					

MONONGAHELA RIVER BASIN

03075500 - YOUGHIOGHENY R NR OAKLAND, MD (LAT 39 25 19 LONG 079 25 32)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					MAR , 1980				
16...	1035	469	12.0	9.0	10...	1405	687	7.0	5.0
NOV					JUN				
20...	1345	127	23.0	7.0	05...	1340	563	18.0	14.5
27...	1700	385	10.0	8.0	JUL				
DEC					16...	1430	125	32.0	24.0
09...	1700	139	-1.0	.0	AUG				
JAN , 1980					21...	1340	888	24.5	18.0
31...	0930	100	-8.0	.0					

03076500 - YOUGHIOGHENY R AT FRIENDSVILLE, MD (LAT 39 39 13 LONG 079 24 31)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
04...	1230	616	18.0	15.0	21...	1030	575	16.0	12.0
NOV					JUN				
27...	1030	943	9.0	9.0	05...	0955	1080	13.0	14.0
DEC					12...	0900	1100	10.0	11.5
24...	1030	943	9.0	9.0	JUL				
JAN , 1980					17...	1015	166	23.5	22.0
11...	1215	212	15.0	2.5	AUG				
28...	1230	262	-3.0	.5	26...	0930	326	17.0	18.0
30...	1045	207	-4.0	.0	27...	1015	272	20.0	19.0
MAR									
05...	1015	425	2.0	3.0					
10...	1000	1120	6.0	4.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MONONGAHELA RIVER BASIN--CONTINUED

03076600 - BEAR C AT FRIENDSVILLE, MD (LAT 39 39 22 LONG 079 23 41)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
19...	1330	73	21.0	11.0	21...	1400	107	20.0	13.0
NOV					JUN				
20...	1145	50	14.5	6.5	05...	1110	92	14.0	13.0
JAN , 1980					JUL				
11...	1435	46	1.5	10.0	17...	1140	25	25.0	21.5
28...	1415	41	-3.0	.0	AUG				
MAR					26...	1105	51	17.0	16.0
10...	1150	260	7.0	5.0					
18...	1205	25	.0	3.0					

03077940 - SB CASSELMAN R NR BITTINGER, MD (LAT 39 36 06 LONG 079 12 17)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					JUN , 1980				
09...	1125	41	13.0	12.0	05...	1550	5.6	18.0	16.0
JAN , 1980					JUL				
10...	1630	3.8	-2.0	.0	16...	1140	2.7	28.0	19.0
MAR									
18...	1205	25	.0	3.0					

03078000 - CASSELMAN R AT GRANTSVILLE, MD (LAT 39 42 08 LONG 079 08 12)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
03...	1415	412	14.0	13.5	17...	1400	275	12.0	7.0
JAN , 1980					JUN				
10...	1520	51	-2.0	.0	04...	1500	179	16.0	17.0
18...	1200	122	7.0	3.0	JUL				
28...	1615	64	-5.0	.0	17...	1300	25	26.0	24.5
FEB					AUG				
15...	1445	28	2.0	.5	21...	1520	122	17.0	18.0
MAR					27...	0910	41	22.5	17.5
11...	1050	191	-6.0	1.5					

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1980

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Delaware River basin				
01483150	Wiggins Mill-pond Outlet at Townsend, DE	Lat 39°24'12", long 75°42'16", New Castle County, at bridge on State Highway 446, 0.8 mi northwest of Townsend.	3.82	1957-60, 1962-66, 1968-71, 1978-80	9-11-78 5-10-79 2-13-80	2.3 4.0 4.2
		Elk River basin				
01495550	Perch Creek near Elkton, MD	Lat 39°34'16", long 75°48'53", Cecil County, at bridge on U.S. Highway 213, 2.5 mi south of Elkton.	a6.0	1964-75 1978-80	10- 5-78 10-12-78 5-10-79 2-13-80	1.3 1.2 1.4 3.3
		Susquehanna River basin				
01580170	Stout Bottle Branch near Ady, MD	Lat 39°37'14", long 76°20'01", Harford County, at bridge on Walters Mill Road, 150 ft upstream from mouth, and 1.4 mi southwest of Ady.	7.13	1980-	5-15-80 6-23-80 7-17-80 9- 4-80	11 8.8 6.0 3.9
		Gunpowder River basin				
01581830	Grave Run near Beckleysville, MD	Lat 39°39'17", long 76°46'47", Baltimore County, at bridge on Upper Beckleysville Road, 0.9 mi north of Beckleysville, and 1.7 mi downstream from Indian Run.	7.68	1977-80	5-15-80 6-24-80 9- 2-80	11 8.1 3.8
01581870	Georges Run near Beckleysville, MD	Lat 39°37'33", long 76°46'23", Baltimore County, at bridge on Georges Creek Road, 0.6 mi upstream from mouth, and 1.2 mi south of Beckleysville.	15.8	1977-80	5-15-80 6-24-80 9- 2-80	22 16 12
		Patapsco River basin				
01585700	Deep Run at Lawndale, MD	Lat 39°32'06", long 76°52'33", Carroll County, at bridge on county highway, 0.9 mi upstream from mouth, and 1.0 mi north of Lawndale.	6.70	1975-80	5-15-80 6-23-80 9- 2-80	8.3 6.6 3.2
01589345	Gwynns Falls at Baltimore, MD	Lat 39°18'08", long 76°40'20", Baltimore City, at bridge on Hilton Street, 0.8 mi downstream from Dead Run, and 2.0 mi east of Franklintown.	50.7	1980-	5-16-80 6-23-80 7-17-80 9- 2-80	40 26 20 13
		Patuxent River basin				
01591375	Cattail Creek tributary at Daisy, MD	Lat 39°17'58", long 77°03'52", Howard County, at bridge on Daisy Road, 0.3 mi upstream from mouth, and 0.5 mi north of Daisy.	3.12	1977-80	5-15-80 6-24-80 9- 2-80	2.2 3.1 .97

a Approximately.

Discharge measurements made at low-flow partial-record stations during water year 1980

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Patuxent River basin--Continued				
01591650	Hawlings River near Unity, MD	Lat 39°13'03", long 77°06'21", Montgomery County, at bridge on Sundown Road, 2.2 mi southwest of Unity, and 5.0 mi upstream from Reddy Branch.	5.08	1977-80	5-15-80 6-24-80 9- 2-80	5.4 4.9 1.7
01591700	Hawlings River near Sandy Spring, MD	Lat 39°10'29", long 77°01'22", Montgomery County, 100 ft downstream from bridge on State Highway 650, 1.0 mi upstream from mouth, and 1.7 mi north of Sandy Spring.	27.2	1975-80	5-15-80 6-24-80 9- 2-80	30 22 5.9
01593650	Middle Patuxent River tributary near Dayton, MD	Lat 39°14'12", long 76°56'27", Howard County, at bridge on Sheppard Road, 1.6 mi upstream from mouth, and 2.5 mi east of Dayton.	4.25	1977-80	5-15-80 6-24-80 9- 2-80	4.6 3.4 1.2
01593700	Middle Patuxent River tributary near Clarksville, MD	Lat 39°12'00", long 76°55'12", Howard County, 0.1 mi upstream from bridge on Trotter Road, 0.8 mi upstream from mouth, and 1.3 mi southeast of Clarksville.	6.24	1977-80	5-15-80 6-24-80 9- 2-80	5.8 4.0 1.2
01594300	Towsers Branch at Conaways, MD	Lat 39°02'00", long 76°41'38", Anne Arundel County, at bridge on Evergreen Road, 0.7 mi north of Conaways, and 0.8 mi upstream from mouth.	5.69	1975-80	5-15-80 6-23-80 9-16-80	2.2 2.2 1.5
01594455	Stocketts Run near Hardesty, MD	Lat 38°52'58", long 76°39'47", Anne Arundel County, at bridge on Sands Road, 0.9 mi upstream from mouth, and 1.3 mi southeast of Hardesty.	6.68	1977-80	5-16-80 6-23-80 9- 2-80 9-16-80	5.4 2.5 .26 .20
01594465	Rock Branch at Bayard, MD	Lat 38°51'17", long 76°41'16", Anne Arundel County, at bridge on Sands Road, 0.2 mi upstream from mouth, and 0.8 mi northwest of Bayard.	5.88	1977-80	5-16-80 6-23-80 9- 2-80 9-16-80	6.2 2.4 .39 .43
01594490	Northeast Branch at Kolbes Corner, MD	Lat 38°54'03", long 76°47'35", Prince Georges County, at bridge on State Highway 556, 0.1 mi north of Kolbes Corner, and 0.5 mi upstream from mouth.	7.74	1977-80	5-16-80 6-23-80 9- 2-80 9-16-80	2.9 1.8 .39 .40
		Potomac River basin				
01594975	Glade Run at Steyer, MD	Lat 39°18'08", long 79°19'33", Garrett County, on Steyer Gorman Road, 0.1 mi upstream from mouth, and 0.7 mi west of Steyer.	8.86	1977-80	4-23-80 6-23-80 9- 4-80 9- 9-80	12 9.2 4.2 2.7
01596200	Little Savage River near Avilton, MD	Lat 39°36'59", long 79°01'29", Garrett County, at bridge on Avilton-Lonaconing Road, 1.7 mi north of Mt. Zion, and 2.7 mi upstream from mouth.	1.95	1979-80	4-17-79 8-21-79 11-15-79 4-23-80 6-24-80 9- 2-80	4.2 .21 1.4 2.9 .58 .05
01596600	Big Run near Swanton, MD	Lat 39°32'45", long 79°08'31", Garrett County, on Big Run Road, 0.3 mi downstream from Monroe Run, and 7.5 mi northeast of Swanton.	13.4	1977-80	4-23-80 6-24-80 9- 2-80	12 7.1 4.3
01597100	Middle Fork near Swanton, MD	Lat 39°30'46", long 79°09'17", Garrett County, on Savage River Road, 1.0 mi downstream from Toms Spring Run, and 5.5 mi northeast of Swanton.	10.8	1977-80	4-23-80 6-24-80 9- 2-80 9-10-80	13 7.1 2.1 2.1
01598770	Georges Creek near Midland, MD	Lat 39°37'11", long 78°56'46", Allegany County, at bridge on county highway at Ocean, and 1.0 mi downstream from Vale Run.	13.1	1979-80	4-16-79 8-20-79 11-15-79 4-22-80 6-24-80 9- 4-80 9-11-80	13 2.0 4.3 14 1.5 0 0
01598775	Woodland Creek at Ocean, MD	Lat 39°36"12", long 78°56'46", Allegany County, at bridge on county hi, 0.1 mi northwest of Ocean, and 0.6 mi downstream from Staub Run.	5.49	1979-80	4-16-79 11-15-79 4-22-80 6-24-80 9- 4-80	5.7 .59 4.5 .07 0

Discharge measurements made at low-flow partial-record stations during water year 1980

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Potomac River basin--Continued				
01598980	Mill Run at Morrison, MD	Lat 39°31'03", long 79°01'44", Allegany County, at bridge on county highway, 0.5 mi upstream from mouth, and 0.5 mi northwest of Morrison.	7.35	1979-80	4-16-79	14
					8-21-79	2.5
					11-15-79	4.9
					4-22-80	12
					6-24-80	4.0
					9- 4-80	1.4
					9-11-80	1.0
01599800	Mill Run at Rawlings, MD	Lat 39°32'01", long 78°53'11", Allegany County, at bridge on U.S. Highway 220, 5.0 mi south of Cresaptown.	2.84	1979-80	4-16-79	3.4
					8-21-79	.81
					11-16-79	1.9
					4-22-80	4.8
					6-23-80	.94
					9- 4-80	.35
					9-11-80	.22
01601100	Wills Creek at Ellerslie, MD	Lat 39°43'04", long 78°46'17", Allegany County, at bridge on county highway, 0.3 mi southeast of Ellerslie, and 2.0 mi north of Corriganville.	185	1979-80	4-17-79	230
					8-20-79	80
					11-14-79	221
					4-23-80	231
					6-23-80	67
					9- 2-80	13
					9-10-80	26
01605475	Seven Springs Run at Oldtown, MD	Lat 39°32'29", long 78°36'28", Allegany County, at bridge on county highway at Oldtown, and 1.4 mi downstream from mouth of Trading Run.	9.16	1975-80	4-23-80	5.9
					6-23-80	.42
					9- 2-80	.87
01608950	Murley Branch near Flintstone, MD	Lat 39°41'37", long 78°34'07", Allegany County, on Town Creek Road, 0.7 mi upstream from mouth, and 1.1 mi south of Flintstone.	11.9	1977-78, 1980	4-22-80	30
					6-23-80	15
					9- 2-80	8.9
01608975	Maple Run near Town Creek, MD	Lat 39°36'46", long 78°31'52", Allegany County, on Jacobs Road, 2.7 mi upstream from mouth, and 6.0 mi north of Town Creek.	7.10	1977-78, 1980	4-22-80	4.8
					6-23-80	0
					9- 2-80	0
01613540	Lanes Run near Forsythe, MD	Lat 39°39'50", long 78°00'08°, Washington County, at bridge on Little Cove Road, 1.2 mi north of Indian Springs, and 2.4 mi upstream from mouth.	9.98	1980-	4-22-80	10
					6-24-80	1.5
01636850	Little Catoctin Creek near Brunswick, MD	Lat 39°19'25", long 77°35'35", Frederick County, at bridge on State Highway 464, 1.4 mi northeast of Brunswick, and 2.4 mi upstream from mouth.	8.64	1977-80	5-15-80	5.4
					6-25-80	2.8
					9- 4-80	.45
01636975	Middle Creek at Ellerton, MD	Lat 39°31'33", long 77°32'15", Frederick County, at bridge on Crow Rock Road, 0.4 mi east of Ellerton, and 0.4 mi upstream from West Branch.	22.7	1977-80	5-15-80	29
					6-25-80	8.2
					9- 2-80	1.0
01639325	Friends Creek near Emmitsburg, MD	Lat 39°43'03", long 77°23'35", Frederick County, at concrete ford on Hornets Nest Road, 2.1 mi upstream from mouth, and 3.5 mi northwest of Emmitsburg.	12.2	1977-80	5-15-80	13
					6-25-80	3.7
					9- 2-80	.36
01639440	Silver Run near Silver Run, MD	Lat 39°40'38", long 77°05'37", Carroll County, at bridge on light-duty road, 1.0 mi upstream from mouth, and 2.6 mi west of Silver Run.	8.77	1975-80	5-15-80	11
					6-23-80	4.9
					9- 2-80	1.5
01639465	Bear Branch near Mayberry, MD	Lat 39°38'07", long 77°07'41", Carroll County, at bridge on State Highway 32, 0.8 mi upstream from mouth, and 1.6 mi west of Mayberry.	13.9	1975-80	5-15-80	16
					6-23-80	11
					9- 2-80	4.6
01640160	Beaver Dam Creek near Union Bridge, MD	Lat 39°34'11", long 77°12'53", Frederick County, at bridge on Good Intent Road, 0.4 mi upstream from mouth, and 1.9 mi west of Union Bridge.	7.04	1977-80	5-15-80	6.8
					6-23-80	4.4
					9- 2-80	1.4
01640720	Beaver Branch at Rocky Ridge, MD	Lat 39°36'20", long 77°19'50", Frederick County, at bridge on State Highway 77, 0.6 mi west of Rocky Ridge, and 0.8 mi upstream from mouth.	6.53	1977-80	5-15-80	3.8
					6-25-80	.84
					9- 2-80	0

Discharge measurements made at low-flow partial-record stations during water year 1980

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Potomac River basin--Continued				
01642430	Linganore Creek near New London, MD	Lat 39°26'51", long 77°14'49", Frederick County, at bridge on State Route 75, 100 ft downstream from Dollyhyde Creek, and 2.0 mi northeast of New London.	45.2	1980-	5-15-80	63
					6-25-80	42
					7-17-80	28
					9- 4-80	12
01642450	Bens Branch near New Market, MD	Lat 39°24'58", long 77°16'45", Frederick County, at bridge on light-duty road, 1.1 mi upstream from mouth, and 2.3 mi north of New Market.	11.8	1975-80	5-15-80	12
					6-23-80	8.6
					9- 4-80	3.0
01643125	Ballenger Creek near Lime Kiln, MD	Lat 39°21'52", long 77°25'01", Frederick County, at bridge on State Highway 85, 0.5 mi upstream from mouth, and 1.2 mi northeast of Lime Kiln.	20.2	1977-80	5-15-80	21
					6-25-80	14
					9- 2-80	6.4
01643615	Broad Run at Elmer, MD	Lat 39°07'22", long 77°28'52", Montgomery County, at bridge on River Road, 0.5 mi upstream from mouth, and 1.2 mi south of Elmer.	14.0	1975-80	5-15-80	7.0
					6-24-80	1.9
					9- 2-80	.30
01644425	Bucklodge Branch near Dawsonville, MD	Lat 39°09'11", long 77°20'30", Montgomery County, at bridge on light-duty road, 0.7 mi upstream from mouth, and 1.7 mi north of Dawsonville.	8.47	1975-80	5-15-80	8.5
					6-24-80	5.0
					9- 2-80	1.7
01645050	Dry Seneca Creek near Seneca, MD	Lat 39°05'38", long 77°20'52", Montgomery County, at bridge on Montevideo Road, 0.4 mi upstream from mouth, and 1.1 mi northwest of Seneca.	19.2	1975-80	5-15-80	9.3
					6-24-80	4.1
					9- 2-80	.86
01647620 (revised)	Rock Creek at Redland, MD	Lat 39°08'14", long 77°07'46", Montgomery County, at bridge on State Highway 115, 0.6 mi upstream from Mill Creek and 1.0 mi souteast of Redland.	7.45	1977-80	5-15-80	9.0
					6-24-80	6.2
					9- 2-80	1.8
01649200	Paint Branch at College Park, MD	Lat 39°01'16", long 76°56'45", Prince Georges County, at culvert under eastbound lane of Interstate Highway 495, 1.6 mi northwest of College Park, and 2.5 mi southwest of Beltsville.	17.3	1980-	5-15-80	16
					6-24-80	10
					9- 2-80	4.0
01652580	Oxon Run at Washington, DC	Lat 38°50'20", long 76°59'20", District of Columbia, at bridge on 13th Street, 2.2 mi north of Forest Heights, and 3.5 mi west of Suitland.	6.84	1980-	5-15-80	2.9
					6-24-80	1.1
					9- 2-80	0.22
01653625	Tinkers Creek at Piscataway, MD	Lat 38°42'50", long 76°58'16", Prince Georges County, at bridge on Gallahan Road, 0.5 mi upstream from mouth, and 0.8 mi north of Piscataway.	15.9	1975-80	5-16-80	7.3
					6-24-80	4.3
					9- 2-80	.12
					9-16-80	.29
01657900	Mattawoman Creek near Waldorf, MD	Lat 38°39'10", long 76°51'55", Charles County, at bridge on Acton Lane/Gardner Road, 1.9 mi west of Mattawoman, and 2.0 mi north of Waldorf.	16.9	1980-	5-16-80	4.4
					6-24-80	.94
					9- 2-80	0.0
01660650	Mill Run at Welcome, MD	Lat 38°28'58", long 77°05'04", Charles County, at bridge on State Highway 6, 0.8 mi east of Welcome, and 2.3 mi upstream from mouth.	9.89	1980	5-16-80	5.0
					6-24-80	1.6
					9- 3-80	0.0
					9-15-80	0.0
01660740	Port Tobacco Creek near Marshalls Corner, MD	Lat 38°32'34", long 77°01'04" Charles County, at bridge on State Highway 225, 0.25 mi downstream from Jennie Run, and 1.4 mi southeast of Marshalls Corner.	15.8	1977-80	5-16-80	8.2
					6-24-80	2.3
					9- 3-80	0
					9-15-80	0
01660905	Zekiah Swamp Run near Malcom, MD	Lat 38°36'52", long 76°49'59", Charles County, at bridge on State Highway 382, 0.9 mi downstream from Wolf Den Branch, and 2.4 mi west of Malcom.	12.1	1975-80	5-16-80	8.0
					6-24-80	5.5
					9- 3-80	.02
01661200	Brooks Run near Hollywood, MD	Lat 38°19'57", long 76°35'55", St. Marys County, at culvert on State Highway 245, 0.3 mi downstream from Lows Run, and 1.7 mi southwest of Hollywood.	5.76	1980-	5-16-80	2.8
					6-24-80	.69
					9- 3-80	.14
					9-15-80	.15
01661410	Glebe Run at Leonardtown, MD	Lat 38°17'05", long 76°37'07", St. Marys County, at culvert on State Highway 5, 0.5 mi downstream from Gravely Run, and 1.1 mi southeast of Leonardtown.	5.81	1980-	6-24-80	1.6
					9- 3-80	.51
					9-15-80	.50

Discharge measurements made at low-flow partial-record stations during water year 1980

					Measurements	
Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Discharge (ft^3/s)
		Monongahela River basin				
03075350	Cherry Creek near Crellin, MD	Lat 39°22'06", long 79°27'16", Garrett County, at bridge on Underwood Road, 0.4 mi upstream from mouth, and 1.5 mi south of Crellin.	16.7	1977-80	4-23-80	21
					6-22-80	15
					9- 4-80	4.8
03075700	Muddy Creek at Swallow Falls State Park, MD	Lat 39°30'10", long 79°25'08", Garrett County, at bridge in Swallow Falls State Park, 0.1 mi upstream from mouth, and 6.7 mi north of Oakland.	17.8	1979-80	4-19-79	48
					8-20-79	24
					11-14-79	30
					4-23-80	40
					6-23-80	28
					9- 4-80	9.8
03077925	North Branch Casselman River near Grantsville, MD	Lat 39°40'08", long 79°10'43", Garrett County, at bridge on State Highway 495, 250 ft upstream from confluence with South Branch Casselman River, and 2.3 mi southwest of Grantsville.	24.4	1975-80	11-14-79	30

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1980

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		Susquehanna River basin					
01577940	Broad Creek tributary at Whiteford, MD	Lat 39°42'14", long 76°21'49", Harford County, at upstream side of culvert on State Highway 165, 0.8 mi upstream from mouth, and 1.0 mi southwest of Whiteford.	.77	1971-80	3-21-80	5.0	80
		Gunpowder River basin					
01584500	Little Gunpowder Falls at Laurel Brook, MD	Lat 39°30'18", long 76°25'56", Baltimore County, 750 ft upstream from bridge on Bottom Road, 5 mi southwest of Bel Air, and 10.5 mi upstream from mouth.	36.1	1927-70‡, 1971-80	6- 7-80	6.4	3,130
		Patapsco River basin					
01589240	Gwynns Falls at McDonogh, MD	Lat 39°23'28", long 76°45'56", Baltimore County, at bridge on McDonogh Road at McDonogh, and 0.3 mi upstream from Horsehead Branch.	19.3	1958-80	10- 1-79	Unknown	
		Potomac River basin					
01596005	Savage River near Frostburg, MD	Lat 39°40'56", long 78°57'54", Garrett County, at upstream side of culvert on U.S. Highway 40, 1.9 mi northwest of Frostburg city limits, and about 26 mi upstream from mouth.	a1.5	1971-80	1980	b<19.0	-
01601000	Wills Creek below Hyndman, PA	Lat 39°48'43", long 78°43'00", Bedford County, 150 ft above county highway bridge, 150 ft downstream from Pennsylvania Railroad bridge, 0.35 mi downstream from Little Wills Creek, and 0.5 mi south of Hyndman.	146	1951-67‡, 1968-80	4- 9-80	7.26	4,850
01610105	Pratt Hollow tributary at Pratt, MD	Lat 39°41'35", long 78°30'18", Allegany County, at upstream side of culvert on U.S. Highway 40, 0.2 mi northeast of Pratt, and 1.0 mi upstream from Kifer Hollow.	.70	1971-80	5-21-80	12.1	70
01610150	Bear Creek at Forest Park, MD	Lat 39°42'07", long 78°19'02", Washington County, at upstream side of culvert on U.S. Highway 40, 0.2 mi upstream from mouth, and 0.9 mi west of Forest Park.	10.4	1965-69, 1971-80	3-14-80	4.3	190

‡ Operated as a continuous-record station.
a Approximately.
b Peak stage did not reach bottom of gage.

Annual maximum discharge at crest-stage partial-record stations during water year 1980

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft³/s)
		Potomac River Basin--Continued					
01613150	Ditch Run near Hancock, MD	Lat 39°41'30", long 78°07'57", Washington County, at upstream side of culvert on U.S. Highway 40, 0.3 mi upstream from mouth, and 2.7 mi east of Hancock.	a4.8	1965-80	12-25-79	4.5	113
01640000	Little Pipe Creek at Avondale, MD	Lat 39°33'40", long 77°02'38", Carroll County, at private bridge 0.1 mi below Copps Branch, and 0.5 mi northwest of Avondale.	8.10	1948-56‡, 1959-64, 1967-80	10- 1-79	5.51	690
01646550	Little Falls Branch near Bethesda, MD	Lat 38°57'27", long 77°06'31", Montgomery County, on left bank at downstream side of bridge on Massachusetts Avenue, 1.7 mi upstream from mouth, and 2.0 mi southwest of Bethesda.	a4.1	1944-59‡, 1960-61, 1962-78‡, 1979-80	10- 1-79	2.70	231
01658000	Mattawoman Creek near Pomonkey MD	Lat 38°35'45", long 77°03'25", Charles County, at downstream side of bridge on State Highway 227, 1.2 mi southeast of Pomonkey, and 12.6 mi upstream from mouth.	54.8	1949-72‡, 1973-80	10-10-79	5.18	1,450
01660900	Wolf Den Branch near Cedarville, MD	Lat 38°38'29", long 76°49'02", Charles County, at upstream side of culvert on Forest Road, 1.5 mi upstream from mouth, and 1.6 mi southwest of Cedarville.	a2.3	1966-80	10-10-79	4.6	72
		Monongahela River basin					
03075600	Toliver Run tributary near Hoyes Run, MD	Lat 39°29'39", long 79°25'14", Garrett County, at upstream side of culvert on Swallow Falls Road, 100 ft upstream from mouth, and 2.4 mi south of Hoyes Run.	.53	1965-80	4- 9-80	3.9	11
03078500	Big Piney Run near Salisbury, PA	Lat 39°43'34", long 79°02'55", Somerset County, 660 ft upstream from Little Piney Run, and 2.5 mi southeast of Salisbury.	24.5	1932-70‡, 1974-80	4- 9-80	5.78	2,280

a Approximately.
‡ Operated as a continuous-record station.

Annual maximum discharge at crest-stage partial-record stations during water year 1980

Tidal crest-stage partial-record stations

The following table contains annual maximum stages for tidal crest-stage stations. The information is obtained from a crest-stage gage or a water-stage recorder located at each site. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. All stages are elevations above National Geodetic Vertical Datum of 1929. Only the maximum stage is given. Information on some other high stages may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum stage at tidal crest-stage partial-record stations during water year 1980

Station No.	Station name	Location	Period of Record	Annual maximum	
				Date	Elevation, in feet NGVD
		Smyrna River basin			
01483335	Duck Creek at Smyrna, DE	Lat 39°18'31", long 75°36'34", Kent County, at bridge on U.S. Highway 13, at north edge of Smyrna, 2 mi north of intersection of State Highway 300 and U.S. Highway 13 on downstream right wingwall of bridge.	1966-80	7-29-80	5.53
		Murderkill River basin			
01484085	Murderkill River at Bowers, DE	Lat 39°03'30", long 75°23'51", Kent County, at Faulkner's Landing in Bowers, on left bank 10 ft southeast of southeast corner of restaurant on Faulkner's Pier.	1966-80	1-17-80	5.81
		Cedar Creek basin			
01484235	Cedar Creek near Slaughter Beach, DE	Lat 38°56'06", long 75°19'26", Sussex County, at bridge No. S-164 on State Highway 36, 1.8 mi northwest of Slaughter Beach.	1966-80	1-17-80	4.62
		Indian River basin			
01484595	Indian River at Oak Orchard, DE	Lat 38°35'45", long 75°10'24", Sussex County, at Hanes Landing 2.0 mi southeast of intersection of State Highways 24 and 5, at Oak Orchard.	1966-80	12-20-80	3.70

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. All measurements in this table were made during periods of base flow, except as otherwise noted.

Discharge measurements made at miscellaneous sites during water year 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Smyrna River basin				
Mill Creek	Smyrna River	Lat 39°17'11", long 75°36'39", Kent County, at culvert on Road No. 137, 1 mile upstream from U.S. Highway 13 and 1 mile southwest of Smyrna, Del.	5.0	-	7-29-80	†1,230
Mill Creek	Smyrna River	Lat 39°17'50", long 75°36'01", Kent County, approximately 300 ft downstream from U.S. Highway 13, 2.9 miles upstream from mouth and about 400 ft downstream from Lake Como at Smyrna, Del.	6.7	-	7-29-80	†2,520
Providence Creek	Smyrna River	Lat 39°18'05", long 75°38'28", Kent County, at culvert on Road No. 38, 0.8 mile upstream from Duck Creek Pond, 500 ft upstream from Pennsylvania Railroad, and 0.8 mile northwest of Clayton, Del.	12.4	-	7-29-80	†910
		Gunpowder River basin				
01581955 Gunpowder Falls	Gunpowder River	Lat 39°36'32", long 76°38'08", Baltimore County, at bridge on Big Falls Road, 2.0 mi northeast of Hereford, Md.	91.6	1975-79	11- 1-79	159
					11-20-79	131
					12-19-79	98
					1-24-80	37
					3-12-80	82
					4-22-80	140
					6- 5-80	107
					7-16-80	60
					8-22-80	52
01583985 Gunpowder Falls	Gunpowder River	Lat 39°25'31", long 76°31'47", Baltimore County, at bridge on Cromwell Bridge Road, 0.5 mi northeast of Loch Raven, Md.	308	1975-79	10-16-79	591
					11-15-80	453
					1-29-80	212
					4-10-80	650
					5- 6-80	494
					6- 3-80	282
					7-15-80	47
					8-27-80	5.6
		Potomac River basin				
01598000 Savage River	North Branch Potomac River	Lat 39°29'00", long 79°04'24", Garrett County, 0.4 mi upstream from mouth, and 0.5 mi north of Bloomington, Md.	115	1905-06‡ 1924-27‡ 1929-50‡ 1975-78	6- 9-80	162
					7-18-80	30
Potomac Blue Spring	North Branch Potomac	Lat 39°34'26", long 78°43'50", Allegany County, 200 ft below abandoned C&O Canal lock, 1.1 mi northwest of Spring Gap, Md.	-	1958-78	9- 2-80	11
Murley Branch	Murley Branch	Lat 39°39'38", long 78°37'08", Allegany County, below dam at spring house of farm on Williams Road, 4.0 mi southwest of Flintstone, Md.	-	1958-78	9- 2-80	1.5

† Peak flow.
‡ Operated as a continuous-record station.

Discharge measurements made at miscellaneous sites during water year 1980

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Potomac River basin--Continued				
01601420 Hoffman Drainage Tunnel	Braddock Run	Lat 39°38'18", long 78°53'35", Allegany County, upstream from State Highway 55, 0.5 mi southwest of Clarysville, and 2.1 mi southeast of Frostburg, Md.		1944, 1958-59, 1964, 1965, 1967-79	11-15-79	23
					4-10-80	31
					9-11-80	19
01601490 Braddock Run	Wills Creek	Lat 39°40'12", long 78°47'37", Allegany County, 0.2 mi upstream from mouth, and 2.0 mi northwest of Cumberland, Md.	17.5	1975-79	10-18-79	41
					4- 8-80	59
					4-22-80	55
					6-23-80	39
					7-16-80	33
					8-22-80	23
					9- 2-80	21
					9-10-80	17
					9-16-80	19
01643580 Monocacy River	Potomac River	Lat 39°14'11", long 77°26'25", Frederick County, at bridge on State Highway 28, 1.9 mi northwest of Dickerson, Md., and 2.0 mi upstream from mouth.	968	1975-77 1979	10-11-79	9200
					8-26-80	230
01645080 Seneca Creek	Potomac River	Lat 39°05'28", long 77°19'47", Montgomery County, 50 ft upstream from Hooker Branch, 1.0 mi northeast of Seneca, Md., and 1.9 mi upstream from mouth.	128	1975-79	10-17-79	247
					2-25-80	122
					4-11-80	236
					5- 7-80	187
					6- 3-80	134
					7-18-80	62

Delaware River basin low-flow investigations

Three series of base-flow discharge measurements were made in the Delaware River basin as part of a ground-water modeling study in cooperation with the Delaware Department of Natural Resources and Environmental Control and the Corps of Engineers, U.S. Army. The three series were made Nov. 1, Feb. 13, and July 17, respectively, under conditions of low base flow.

Weather records at Blackbird within the southern part of the area and at Wilmington Airport at the northeastern edge of the area show no precipitation four days prior to Nov. 1, eight days prior to Feb. 13, and ten days prior to July 17. The measurements are considered to represent base flow.

The measurements on each stream are listed in order proceeding downstream, and each tributary is inserted in the order in which it enters the main stream. Drainage areas were determined from recent U.S. Geological Survey topographic maps of a scale of 1:24,000 and contour interval of 10 to 20 ft. Previous series of measurements were made in water years 1978-79.

Discharge measurements of tributaries to the Delaware River in New Castle County, DE, and Cecil County, MD

Stream	Location	Drainage area (mi^2)	Measured discharge (ft^3/s)	Cfs per square mile	Measured discharge (ft^3/s)	Cfs per square mile	Measured discharge (ft^3/s)	Cfs per square mile
			Nov. 1, 1979		Feb. 13, 1980		July 17, 1980	
Belltown Run	Lat 39°36'27", long 75°43'26", New Castle County, at culvert on U.S. Highway 40, and 1.2 mi east of Glasgow.	3.35	2.61	0.779	1.40	0.418	0.71	0.212
Muddy Run	Lat 39°37'34", long 75°43'28", New Castle County, at bridge on State Highway 72, 1.9 mi northeast of Glasgow, and 0.9 mi southeast of Coochs Bridge.	8.21	2.08	0.253	2.00	0.244	1.06	0.129
Christina River	Gaging station at Bear (01478040)	40.6	17.0	0.419	14.1	0.347	-	-
White Clay Creek Tributary	Lat 39°40'58", long 75°42'36", New Castle County, at culvert on State Highway 273, 100 ft east of Penn Central Railroad, and 0.7 mi northwest of Ogletown.	3.68	-	-	.80	0.217	.79	0.215
Army Creek	Gaging station at State Road (01482200)	2.42	.18	0.074	.19	0.079	.13	0.054
Red Lion Creek	Gaging station near Red Lion (01482298)	3.08	1.98	0.643	1.74	0.565	.55	0.179
Dragon Creek	Lat 39°34'23", long 75°41'20", New Castle County, at culvert in trailer park 1500 ft downstream from U.S. Highway 301S, 6.8 mi upstream from mouth, and 0.5 mi northeast of Kirkwood.	1.93	1.21	0.627	.94	0.487	.27	0.140
Dragon Creek Tributary	Lat 39°33'52", 75°41'16", New Castle County, at culvert on Road No. 409, 0.4 mi upstream from mouth, and 0.7 mi east of Kirkwood.	0.16	.18	1.125	.12	0.750	.05	0.313
Joy Run	Lat 39°32'02", long 75°41'48", New Castle County, at culvert on Road No. 412, 0.6 mi upstream from mouth at Chesapeake and Delaware Canal, and 1.6 mi east of Summit Bridge.	1.26	-	-	1.87	1.484	1.68	1.333
Scott Run	Lat 39°31'30", long 75°39'54", New Castle County, at culvert on Road No. 413, 3.7 mi upstream from mouth at Chesapeake and Delaware Canal, and 1.9 mi northwest of Boyds Corner.	2.18	1.00	0.459	.93	0.427	1.06	0.486
Drawyer Creek	Lat 39°29'34", long 75°41'24", New Castle County, at culvert on Road No. 427, 0.5 mi upstream from Shallcross Lake, and 1.7 mi southeast of Mt. Pleasant.	1.54	.65	0.422	.64	0.416	.45	0.292
Drawyer Creek Tributary	Lat 39°29'05", long 75°41'48", New Castle County, at culvert on Road No. 427, 0.7 mi upstream from Shallcross Lake, and 1.2 mi northeast of Armstrong.	1.79	1.09	0.609	1.45	0.810	-	-
Drawyer Creek Tributary	Gaging station near Odessa (01483170)	4.68	3.34	0.714	3.53	0.754	2.26	0.483
Blackbird Creek	Gaging station at Blackbird (01483200)	3.85	3.7	0.961	2.33	0.605	1.25	0.325
Back Creek	Lat 39°30'36", long 75°45'10", New Castle County, at bridge on County Road 435, from Maryland state line, 2.3 mi west of Mt. Pleasant, DE.	4.40	-	-	2.90	0.659	-	-
Long Creek	Gaging station near Chesapeake City (01495800)	4.36	1.3	0.298	2.29	0.525	.66	0.151

Cattail Creek basin low-flow investigations

Three series of base-flow discharge measurements were made in the Cattail Creek basin as part of a ground-water modeling study in cooperation with the Maryland Geological Survey. The first series was made on June 25, when high base flow conditions prevailed. The second and third series were made on August 8 and September 3, respectively, under conditions of low base flow.

Weather records at Damascus near the southwest part of the area show that no precipitation occurred for nine days prior to June 25, five days prior to August 8, and seven days prior to September 3. Therefore, the measurements are considered to represent base flow.

The measurements on the stream are listed in order proceeding downstream, and each tributary is inserted in the order in which it enters the main stream. Drainage areas shown were determined from recent U.S. Geological Survey topographic maps of a scale 1:24,000 and contour interval of 20 ft. No previous series of measurements have been made.

Discharge measurements of Cattail Creek and tributaries at Carrs Mill, MD

Stream	Location	Drainage area (mi^2)	Measured discharge (ft^3/s)	Cfs per square mile	Measured discharge (ft^3/s)	Cfs per square mile	Measured discharge (ft^3/s)	Cfs per square mile
			June 25, 1980		Aug. 8, 1980		Sept. 3, 1980	
Cattail Creek Tributary	Lat 39°20'23", long 77°04'10", Howard County, at culvert on city road, 0.3 mi north of Lisbon.	0.74	.59	0.797	1.04	1.405	.40	0.540
Cattail Creek	Lat 39°19'58", long 77°03'22', Howard County, at culvert on State Highway 144, 0.8 mi east of Lisbon.	1.82	1.60	0.879	1.00	0.549	.66	0.363
Cattail Creek Tributary	Lat 39°19'41", long 77°02'44", Howard County, at culvert on State Highway 144, 1.5 mi northwest of Cookesville.	0.34	.16	0.470	.08	0.235	.03	0.088
Do.....	Lat 39°19'44", long 77°02'31", Howard County, at culvert on State Highway 144, 1.3 mi northwest of Cookesville.	0.24	.16	0.667	.05	0.208	.02	0.083
Do.....	Lat 39°19'21", long 77°03'06", Howard County, at culvert on farm road, 0.5 mi north of Carrs Mill.	1.66	1.14	0.687	.69	0.416	.43	0.259
Do.....	Lat 39°19'09", long 77°05'22", Howard County, at culvert on Mullinix Road, 1.5 mi southwest of Lisbon.	0.73	.91	1.246	.63	0.863	.39	0.534
Do.....	Lat 39°19'38", long 77°05'04", Howard County, at culvert on State Highway 94, 0.9 mi southwest of Lisbon.	0.34	.46	1.353	.23	0.676	.16	0.470
Do.....	Lat 39°19'51", long 77°04'45", Howard County, at culvert on State Highway 94, 0.5 mi southwest of Lisbon.	0.44	.41	0.932	.18	0.409	.10	0.227
Do.....	Lat 39°20'09", long 77°04'29", Howard County, at culvert on State Highway 94, 0.1 mi southwest of Lisbon.	0.18	.04	0.222	0	0	0	0
Do.....	Lat 39°19'34", long 77°04'15", Howard County, at culvert on farm road, 0.7 mi south of Lisbon.	1.11	.73	0.658	.41	0.369	.24	0.216
Do.....	Lat 39°18'57", long 77°03'14", Howard County, at culvert on Daisey Road, 0.5 mi west of Carrs Mill.	3.90	2.95	0.756	2.22	0.569	1.41	0.361
Cattail Creek	Gaging station near Cookesville (01591350)	8.38	6.65	0.794	3.95	0.471	2.85	0.340

Water-quality partial-record stations are particular sites where chemical-quality, biological, and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are collected usually less than quarterly.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN

01477875 - CHRISTINA R AT HUNTING HILLS NEWARK DE

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV											
06...	1350	5.7	175	6.9	12.5	7.0	11.5	41	10	3.9	7.6

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)
NOV											
06...	27	.5	2.5	15	9.5	16	121	.16	1.86	2.3	.00

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)
NOV										
06...	2.3	.05	.06	.20	.25	2.6	12	.010	.00	.03

DATE	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
NOV										
06...	.00	2	8	0	75	0	26	0	24	.01

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01477875 CHRISTINA R AT HUNTING HILLS NEWARK DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1979 TO NOVEMBER 1979

DATE	NOV 6.79
TIME	1350
TOTAL COUNT	246
DIVERSITY: PHYLUM	0.1
.CLASS	0.1
..ORDER	0.6
...FAMILY	1.2
....GENUS	2.4
....GENUS-INSECTA	2.3

ORGANISM	COUNT
ARTHROPODA (ARTHROPODS)	
.INSECTA	
..COLEOPTERA	
...ELMIDAE	
....OPTIOSERVUS	3
..DIPTERA	
...CHIRONOMIDAE	
....CONCHAPELOPIA.ARCTO.RHEO	1
....CRICOTOPUS	3
....EUKIEFFERIELLA	1
....POLYPEDILUM	1
...SIMULIIDAE	
....SIMULIUM	1
...TIPULIDAE	
....ANTOCHA	2
..EPHEMEROPTERA	
...BAETIDAE	
....PSEUDOCLOEON	3
...EPHEMERELLIDAE	
....EPHEMERELLA	3
..TRICHOPTERA	
...GLOSSOSOMATIDAE	
....GLOSSOSOMA	3
...HYDROPSYCHIDAE	
....CHEUMATOPSYCHE	112
....HYDROPSYCHE	29
....SYMPHITOPSYCHE	63
...HYDROPTILIDAE	
....HYDROPTILA	2
...PHILOPOTAMIDAE	
....CHIMARRA	16
MOLLUSCA (MOLLUSCS)	
.GASTROPODA	
..BASOMMATOPHORA	
...PHYSIDAE	
....PHYSA	1
PLATYHELMINTHES (FLATWORMS)	
.TURBELLARIA	
..TRICLADIDA	
...PLANARIIDAE	
....UNKNOWN GENUS	2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01477960 - CHRISTINA R AT ROLLING GREEN NEWARK DE

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT											
29...	1415	13	143	6.9	18.0	10.0	13.4	46	11	4.5	9.8

DATE	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)
OCT											
29...	30	.6	2.3	17	12	17	106	.14	3.72	2.2	.01

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS PO4)	PHOSPHORUS, TOTAL (MG/L AS PO4)
OCT										
29...	2.2	.00	.00	1.3	1.3	3.5	16	.010	.03	.03

DATE	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS P)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT										
29...	.01	1	14	0	150	0	51	1	21	.07

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01477960 CHRISTINA R AT ROLLING GREEN NEWARK DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1979 TO OCTOBER 1979

DATE	OCT 29,79
TIME	1415
TOTAL COUNT	68
DIVERSITY: PHYLUM	0.4
.CLASS	0.4
..ORDER	1.2
...FAMILY	1.7
....GENUS	2.1
....GENUS-INSECTA	1.9

ORGANISM	COUNT
ANNELIDA	
.OLIGOCHAETA	
..PLESIOPORA	
...NAIDIDAE	
....UNKNOWN GENUS	2
ARTHROPODA (ARTHROPODS)	
.INSECTA	
..DIPTERA	
...CHIRONOMIDAE	
....CRICOTOPUS	40
....RHEOTANYTARSUS	1
...EMPIDIDAE	
....HEMERODROMIA	1
...TIPULIDAE	
....ANTOCHA	5
..EPHEMEROPTERA	
...HEPTAGENIIDAE	
....STENACRON	1
..TRICHOPTERA	
...HYDROPSYCHIDAE	
....CHEUMATOPSYCHE	6
....HYDROPSYCHE	7
....SYMPHITOPSYCHE	3
MOLLUSCA (MOLLUSCS)	
.GASTROPODA	
..BASOMMATOPHORA	
...ANCYLIDAE	
....FERRISSIA	2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01478700 - WHITE CLAY C BL NEWARK, DE

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
NOV											
05...	1345	108	270	6.9	11.0	8.0	11.6	84	21	7.7	7.4

DATE	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)
NOV											
05...	15	.4	4.8	26	13	14	144	.20	42.0	2.9	.01

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS PO4)	PHOSPHORUS, TOTAL (MG/L AS PO4)
NOV										
05...	2.9	.02	.03	.22	.24	3.1	14	.050	.06	.15

DATE	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS P)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV										
05...	.02	0	7	0	79	120	38	0	540	.01

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01478700 WHITE CLAY C BL NEWARK, DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1979 TO NOVEMBER 1979

DATE	NOV 5,79
TIME	1345
TOTAL COUNT	21
DIVERSITY: PHYLUM	0.0
.CLASS	0.0
..ORDER	0.6
...FAMILY	0.6
....GENUS	0.7
....GENUS-INSECTA	0.7

ORGANISM	COUNT
ARTHROPODA (ARTHROPODS)	
.INSECTA	
..DIPTERA	
...CHIRONOMIDAE	
....CRICOTOPUS	18
..TRICHOPTERA	
...HYDROPSYCHIDAE	
....CHEUMATOPSYCHE	1
....SYMPHITOPSYCHE	2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01478880 - WHITE CLAY C TR NR NEWARK DE

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT												
16...	1215	1.5	305	7.6	16.5	10.5	5	11.3	110	96	20	14
APR												
17...	1035	1.8	247	6.5	9.0	8.2	5	12.1	84	55	17	10
SEP												
11...	1130	.08	280	6.6	26.0	19.8	10	7.9	86	43	20	8.7

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT											
16...	13	34	.5	3.4	12	80	21	.2	13	185	181
APR											
17...	>14	>26	>.7	2.5	29	46	25	.2	9.4	144	110
SEP											
11...	19	31	.9	4.0	43	55	33	.3	6.5	173	153

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT											
16...	.25	.75	2.2	.040	.12	10000	900	9100	490	0	530
APR											
17...	.20	.70	2.0	.030	.09	5100	1200	3900	420	380	40
SEP											
11...	.24	.04	.87	.000	.00	560	420	140	80	20	60

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01479955 - RED CLAY C AT ASHLAND DE

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT											
31...	1305	44	293	7.0	13.5	9.5	11.9	100	24	9.7	12

DATE	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)
OCT											
31...	20	.5	4.3	32	18	15	170	.23	20.2	4.8	.02

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS PO4)	PHOSPHORUS, TOTAL (MG/L AS PO4)
OCT										
31...	4.8	.04	.05	.31	.35	5.2	23	.390	1.0	1.2

DATE	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS P)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT										
31...	.33	3	8	1	48	0	35	0	380	.02

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01479955 RED CLAY C AT ASHLAND DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1979 TO OCTOBER 1979

DATE	OCT 31,79
TIME	1305
TOTAL COUNT	16
DIVERSITY: PHYLUM	1.4
.CLASS	1.5
..ORDER	1.5
...FAMILY	2.0
....GENUS	2.4
....GENUS-INSECTA	1.8

ORGANISM	COUNT
ANNELIDA	
.HIRUDINEA	
..PHARYNGOBDELLIDA	
...ERPOBDELLIDAE	
....UNKNOWN GENUS	1
.OLIGOCHAETA	
..PLESIOPORA	
...NAIDIDAE	
....UNKNOWN GENUS	1
ARTHROPODA (ARTHROPODS)	
.INSECTA	
..DIPTERA	
...CHIRONOMIDAE	
....CRICOTOPUS	1
....PSECTROCLADIUS	2
....RHEOTANYTARSUS	1
...SIMULIIDAE	
....SIMULIUM	4
MOLLUSCA (MOLLUSCS)	
.GASTROPODA	
..BASOMMATOPHORA	
...PHYSIDAE	
....PHYSA	6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01480019 - RED CLAY C AT STANTON DE

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT											
29...	1215	67	230	7.4	15.5	4.5	12.1	90	22	8.6	10

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)
OCT											
29...	19	.5	3.6	24	15	16	148	.20	26.8	3.5	.01

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)
OCT										
29...	3.5	.00	.00	.91	.91	4.4	20	.190	.42	.58

DATE	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT										
29...	.14	0	8	0	68	0	28	0	200	.04

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01480019 RED CLAY C AT STANTON DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1979 TO OCTOBER 1979

DATE		OCT 29,79
TIME		1215
TOTAL COUNT		6
DIVERSITY:	PHYLUM	0.0
	.CLASS	0.0
	..ORDER	0.7
	...FAMILY	1.5
	....GENUS	1.5
	....GENUS-INSECTA	1.5

ORGANISM	COUNT
ARTHROPODA (ARTHROPODS)	
.INSECTA	
..DIPTERA	
...CHIRONOMIDAE	
....CRICOTOPUS	2
...SIMULIIDAE	
....SIMULIUM	3
..TRICHOPTERA	
...HYDROPSYCHIDAE	
....SYMPHITOPSYCHE	1

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01481200 BRANDYWINE C AT SMITH BRIDGE DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1979 TO NOVEMBER 1979

DATE	NOV 9,79
TIME	1230
TOTAL COUNT	307
DIVERSITY: PHYLUM	0.4
.CLASS	0.4
..ORDER	1.4
...FAMILY	2.1
....GENUS	2.8
....GENUS-INSECTA	2.5

ORGANISM	COUNT
ANNELIDA	
.OLIGOCHAETA	
..PLESIOPORA	
...NAIDIDAE	
....UNKNOWN GENUS	2
ARTHROPODA (ARTHROPODS)	
.CRUSTACEA	
..AMPHIPODA	
...GAMMARIDAE	
....STYGONECTES	1
.INSECTA	
..COLEOPTERA	
...ELMIDAE	
....OPTIOSERVUS	2
..DIPTERA	
...CHIRONOMIDAE	
....CARDIOCLADIUS	1
....CRICOTOPUS	27
....RHEOTANYTARSUS	2
...EMPIDIDAE	
....HEMERODROMIA	1
...SIMULIIDAE	
....SIMULIUM	1
...TIPULIDAE	
....ANTOCHA	6
..EPHEMEROPTERA	
...HEPTAGENIIDAE	
....STENONEMA	17
..LEPIDOPTERA	
...PYRALIDIDAE	
....PARARGYACTIS	2
..ODONATA	
...COENAGRIIDAE	
....ARGIA	1
..TRICHOPTERA	
...HYDROPSYCHIDAE	
....CHEUMATOPSYCHE	54
....HYDROPSYCHE	8
....SYMPHITOPSYCHE	115
...HYDROPTILIDAE	
....LEUCOTRICHIA	51
MOLLUSCA (MOLLUSCS)	
.GASTROPODA	
..BASOMMATOPHORA	
...ANCYLIDAE	
....FERRISSIA	12
PLATYHELMINTHES (FLATWORMS)	
.TURBELLARIA	
..TRICLADIDA	
...PLANARIIDAE	
....UNKNOWN GENUS	4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01481490 - BRANDYWINE C AT HAGLEY MUSEUM WILMINGTON DE

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV											
13...	1130	768	236	7.0	11.0	10.0	9.2	70	17	6.6	6.4

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)
NOV											
13...	16	.3	2.6	22	12	16	121	.16	251	2.3	.02

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)
NOV										
13...	2.3	.07	.09	.33	.40	2.7	12	.100	.15	.31

DATE	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
NOV										
13...	.05	2	6	6	1600	31	167	6	53	.01

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01481490 BRANDYWINE C AT HAGLEY MUSEUM WILMINGTON DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1979 TO NOVEMBER 1979

DATE	NOV 13,79
TIME	1130
TOTAL COUNT	222
DIVERSITY: PHYLUM	1.5
.CLASS	1.5
..ORDER	2.5
...FAMILY	2.9
....GENUS	3.4
....GENUS-INSECTA	2.7

ORGANISM	COUNT
ANNELIDA	
.HIRUDINEA	
..RHYNCHOBDELLIDA	
...GLOSSIPHONIIDAE	
....PLACOBDELLA	3
.OLIGOCHAETA	
..PLESIOPORA	
...NAIDIDAE	
....UNKNOWN GENUS	17
ARTHROPODA (ARTHROPODS)	
.INSECTA	
..COLEOPTERA	
...ELMIDAE	
....DUBIRAPHIA	1
..DIPTERA	
...CHIRONOMIDAE	
....CARDIOCLADIUS	1
....CRICOTOPUS	6
....EUKIEFFERIELLA	1
....ORTHOCLADIUS	2
....POLYPEDILUM	1
....RHEOTANYTARSUS	2
...TIPULIDAE	
....ANTOCHA	28
..EPHEMEROPTERA	
...HEPTAGENIIDAE	
....STENONEMA	20
..TRICHOPTERA	
...HYDROPSYCHIDAE	
....CHEUMATOPSYCHE	10
....HYDROPSYCHE	8
....SYMPHITOPSYCHE	50
...POLYCENTROPODIDAE	
....NEURECLIPSIS	5
MOLLUSCA (MOLLUSCS)	
.GASTROPODA	
..BASOMMATOPHORA	
...ANCYLIDAE	
....FERRISSIA	4
..MESOGASTROPODA	
...HYDROBIIDAE	
....LYOGYRUS	7
...VIVIPARIDAE	
....CAMPELOMA	42
PLATYHELMINTHES (FLATWORMS)	
.TURBELLARIA	
..TRICLADIDA	
...PLANARIIDAE	
....UNKNOWN GENUS	14

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01481550 - BRANDYWINE C BL ALAPOCAS RN AT WILMINGTON DE

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT
DEC												
12...	1520	520	183	6.6	6.0	14.0	14.0	68	17	6.3	8.4	29

DATE	SODIUM AD-SORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)
DEC											
12...	.4	2.1	21	13	.1	10	112	78	.15	157	2.6

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS PO4)	PHOSPHORUS, TOTAL (MG/L AS PO4)
DEC											
12...	.02	2.6	.03	.04	.11	.14	2.7	12	.120	.21	.37

DATE	PHOSPHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS P)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
DEC											
12...	.07	1	4	0	3	60	0	40	2	30	.00

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01481550 BRANDYW[illegible] C BL ALAPOCAS RN AT WILMINGTON DE
BENTHIC INVERTEBRATE [illegible]LYSES, OCTOBER 1979 TO DECEMBER 1979

DATE	DEC 12,79
TIME	1300
TOTAL COUNT	89
DIVERSITY: PHYLUM	0.5
.CLASS	0.5
..ORDER	1.1
...FAMILY	1.4
....GENUS	2.2
....GENUS-INSECTA	1.8

ORGANISM	COUNT
ANNELIDA	
.OLIGOCHAETA	
..PLESIOPORA	
...NAIDIDAE	
....UNKNOWN GENUS	5
ARTHROPODA (ARTHROPODS)	
.INSECTA	
..DIPTERA	
...CHIRONOMIDAE	
....CARDIOCLADIUS	2
....CRICOTOPUS	2
....PSECTROCLADIUS	5
...EMPIDIDAE	
....HEMERODROMIA	1
...TIPULIDAE	
....ANTOCHA	5
..TRICHOPTERA	
...HYDROPSYCHIDAE	
....CHEUMATOPSYCHE	2
....HYDROPSYCHE	10
....SYMPHITOPSYCHE	54
...POLYCENTROPODIDAE	
....NEURECLIPSIS	1
MOLLUSCA (MOLLUSCS)	
.GASTROPODA	
..BASOMMATOPHORA	
...ANCYLIDAE	
....FERRISSIA	1
PLATYHELMINTHES (FLATWORMS)	
.TURBELLARIA	
..TRICLADIDA	
...PLANARIIDAE	
....UNKNOWN GENUS	1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01482310 - DOLL RN AT RED LION DE

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
APR												
17...	1315	1.1	156	5.5	12.0	12.9	5	9.9	59	31	12	7.0
SEP												
17...	0955	.32	186	6.1	22.5	16.5	0	8.6	58	40	11	7.4

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
APR											
17...	6.9	20	.4	1.9	28	23	15	.1	11	97	94
SEP											
17...	8.4	23	.5	2.3	18	19	19	.1	14	115	92

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
APR											
17...	.13	.30	4.3	.010	.03	410	300	110	170	0	170
SEP											
17...	.16	.10	4.4	.000	.00	160	120	40	250	210	40

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01483170 - DRAWYER C TR NR ODESSA DE

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
APR												
17...	1435	5.8	125	5.9	14.0	13.6	5	10.1	44	26	10	4.6
SEP												
17...	1140	2.0	165	6.4	25.5	16.9	0	7.5	53	32	12	5.6

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
APR											
17...	4.6	18	.3	2.4	18	11	11	.1	13	96	68
SEP											
17...	5.2	17	.3	3.0	21	7.2	13	.1	17	111	79

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
APR											
17...	.13	1.51	4.4	.070	.21	1000	460	540	100	10	90
SEP											
17...	.15	.61	5.5	.040	.12	880	--	--	100	0	100

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01483348 - MILL C NR SMYRNA DE

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
MAR												
20...	1340	3.0	130	6.6	17.0	11.0	20	10.8	46	26	11	4.4
SEP												
17...	1315	.76	186	6.4	28.5	19.8	*	7.5	64	42	16	5.9

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
MAR											
20...	6.2	22	.4	2.0	26	20	14	.1	14	115	84
SEP											
17...	5.7	16	.3	2.5	22	19	14	.2	19	124	96

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
MAR											
20...	.16	.93	3.2	.090	.28	1200	930	270	100	30	70
SEP											
17...	.17	.25	3.1	.110	.34	790	660	130	80	0	80

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01483500 - LEIPSIC R NR CHESWOLD DE

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
MAR 13...	1015	11	136	5.6	.0	3.0	5	11.2	63	39	17	5.0
SEP 15...	1055	6.2	222	6.9	23.5	19.8	5	7.9	79	41	21	6.5

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAR 13...	9.3	24	.5	1.9	24	26	15	.1	19	137	108
SEP 15...	10	21	.5	2.5	38	23	18	.1	25	156	129

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
MAR 13...	.19	4.07	4.0	.080	.25	790	590	200	110	30	80
SEP 15...	.21	2.64	3.8	.100	.31	320	90	230	30	10	20

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01483675 - CAHOON B AT DOVER DE

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
MAR 13...	0920	5.2	92	5.5	-.5	2.0	20	13.2	23	3	5.1	2.4
SEP 15...	1245	1.2	113	6.5	23.5	21.2	10	8.2	26	6	5.7	2.9

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAR 13...	8.9	44	.8	1.5	20	6.7	10	.1	17	81	64
SEP 15...	9.1	40	.8	2.5	20	5.9	12	.1	24	85	75

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
MAR 13...	.11	1.14	2.5	.040	.12	560	290	270	50	10	40
SEP 15...	.12	.28	2.5	.080	.25	540	230	310	260	250	10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01484050 - PRATT B NR FELTON DE

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
MAR 13...	1330	3.5	136	5.6	2.0	4.0	5	11.2	40	23	8.7	4.4
SEP 12...	1330	1.3	137	6.5	27.5	17.6	5	8.3	40	25	8.9	4.4

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
MAR 13...	7.7	24	.5	1.7	17	18	12	.1	17	100	80
SEP 12...	7.7	28	.5	2.2	15	15	12	.0	23	110	82

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
MAR 13...	.14	.95	3.8	.020	.06	440	350	90	50	10	40
SEP 12...	.15	.39	4.1	.000	.00	280	90	190	30	0	30

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DELAWARE RIVER BASIN--CONTINUED

01490600 - MEREDITH B NR SANDTOWN DE

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
MAR 13...	0735	7.3	82	4.9	.5	4.0	50	11.5	20	17	4.9	2.0
SEP 15...	0925	1.4	110	5.9	22.5	19.1	15	7.1	29	15	6.5	3.1

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAR 13...	7.1	41	.7	1.5	3	14	9.6	.1	18	90	60
SEP 15...	6.9	32	.6	2.1	14	15	9.5	.0	24	88	76

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
MAR 13...	.12	1.77	20	.070	.21	2100	1400	740	50	0	50
SEP 15...	.12	.33	1.8	.010	.03	1400	1200	200	80	10	70

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

SUSQUEHANNA RIVER BASIN

01579515 - SUSQUEHANNA R BL CONOWINGO DAM, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	SOLIDS, VOLA-TILE IN BOTTOM MA-TERIAL (MG/KG)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)
NOV 03...	0900	917	272	8.3	9.5	11.5	10.2	155	5170	1.6	1.6	6.9
JUL 13...	1100	--	--	--	--	--	--	--	7240	--	--	--

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	CARBON, TOTAL (MG/L AS C)
NOV 03...	.03	.04	.13	1.6	1.6	1.6	4.7	.06	.05	.05	16
JUL 13...	--	--	--	--	--	--	--	--	--	--	--

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN,TOT IN BOT-TOM MA-TERIAL (MG/KG AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
NOV 03...	.67	.27	.72	.41	.31	2800	2.3	1.9	10	2800	.030
JUL 13...	--	--	--	--	--	1700	--	--	--	--	--

DATE	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	PHOS-PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS PO4)	PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, SUS-PENDED RECOV. (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)
NOV 03...	.12	.09	.030	.04	.00	.00	67	700	100	600	0
JUL 13...	--	--	--	--	--	--	200	--	--	--	0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

SUSQUEHANNA RIVER BASIN--CONTINUED

01579515 - SUSQUEHANNA R BL CONOWINGO DAM, MD

DATE	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)
NOV											
03...	10	10	10	<10	420	390	30	8700	10	90	90
JUL											
13...	10	20	90	20	--	--	--	4700	30	--	--

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, INORGANIC, TOTAL (MG/L AS C)	CARBON, INORGANIC, DISSOLVED (MG/L AS C)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV											
03...	0	960	.00	90	16	2.0	14	13	.0	1.1	0
JUL											
13...	--	8200	.00	130	--	--	--	--	1.3	5.2	8

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
NOV											
03...	.0	0	.4	.2	.7	.0	.0	.0	.0	.0	.0
JUL											
13...	.0	0	1.4	2.7	.3	.0	.0	.0	.0	.0	.0

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4,5-T TOTAL IN BOTTOM MATERIAL (UG/KG)	SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV											
03...	.0	.0	.0	.0	.0	.0	0	.0	0	0	.0
JUL											
13...	.0	.0	.0	.0	.0	.0	0	.0	0	0	.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01594923 - LAUREL RN NR RED OAK

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
JUL 22...	1230	9.6	700	3.1	21.0	6.0	120	120	2.1	104	28

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
JUL 22...	11	2.7	5	.1	1.8	0	200	1.8	.2	17	357

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
JUL 22...	278	.49	9.25	4	.13	.17	.75	.00	.00	.00	.13

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
JUL 22...	.17	.25	.25	.30	.32	.02	.02	.27	.00	.27

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUL 22...	.40	.44	1.8	.000	11000	0	11000	1100	0	1200

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01594926 - CHESTNUT RIDGE RN NR RED OAK

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
JUL 22...	1400	130	6.9	21.0	8.1	46	38	.1	5.0	13	3.2	1.3

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)
JUL 22...	6	.1	1.2	8	38	1.3	.1	5.6	70	71	.10	13

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)
JUL 22...	.38	.30	1.3	.00	.00	.00	.38	.30	.05	.03	.06

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUL 22...	.04	.21	.24	.54	.010	1400	1200	160	450	0	460

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01594930 - LAUREL RN AT DOBBIN RD NR WILSON, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLOR (PLAT-INUM COBALT UNITS)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT , 1979										
16...	0930	--	395	3.5	--	8.0	--	5	76	74
NOV										
15...	1245	25	400	3.7	3.0	2.5	12.3	--	78	78
APR , 1980										
09...	1030	120	143	3.8	13.0	7.5	10.0	--	40	40
JUL										
22...	1030	365	418	34.0	--	28.0	--	--	78	77
SEP										
10...	1415	9.9	622	2.4	18.5	17.5	8.4	--	--	--

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT , 1979										
16...	--	--	19	6.9	1.6	7	.1	1.2	2	110
NOV										
15...	.8	40	19	7.4	2.1	9	.1	1.3	0	130
APR , 1980										
09...	.4	20	11	3.0	.8	4	.1	.9	0	42
JUL										
22...	1.1	55	20	6.8	1.9	5	.1	1.4	1	120
SEP										
10...	1.7	84	--	--	--	--	--	--	--	200

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)
OCT , 1979										
16...	1.2	.2	11	179	159	.24	--	.44	.000	.00
NOV										
15...	1.1	.2	13	202	184	.27	13.6	--	--	--
APR , 1980										
09...	.9	.1	5.3	94	69	.13	30.5	--	--	--
JUL										
22...	1.6	.2	10	280	170	.38	276	.17	.020	.06
SEP										
10...	--	--	--	332	--	.45	8.87	--	--	--

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	COAL IN BOTTOM MATE-RIAL (GM/KG)
OCT , 1979										
16...	6400	100	6300	840	0	860	--	--	--	--
NOV										
15...	6600	0	6600	810	40	770	--	--	--	--
APR , 1980										
09...	5700	4100	1600	480	10	470	3.7	46	15	--
JUL										
22...	5200	900	4300	850	0	870	--	--	--	--
SEP										
10...	5300	700	4600	1200	0	1300	--	--	--	3.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01594931 - NB POTOMAC R AT WILSON, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
NOV , 1979 15...	1430	62	390	4.6	2.0	3.0	12.2	--	--	.4	20	--
APR , 1980 09...	1345	350	189	4.7	18.0	10.5	9.1	82	80	.1	5.0	28
SEP 10...	1230	23	--	3.5	16.5	19.3	8.5	--	--	.5	26	--

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
NOV , 1979 15...	--	--	--	--	--	0	150	--	--	--	240	--
APR , 1980 09...	3.0	1.1	3	.1	.9	2	68	.9	.1	4.1	137	110
SEP 10...	--	--	--	--	--	--	480	--	--	--	823	--

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979 15...	.33	40.2	3300	1300	2000	480	0	500	--	--	--	--
APR , 1980 09...	.19	129	3800	3300	500	290	50	240	4.1	61	58	--
SEP 10...	1.12	51.1	1600	730	870	610	0	640	--	--	--	1.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01594934 - SF SAND RN NR WILSON, MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
JUL											
12...	1100	1.9	240	7.4	10.0	4	110	82	36	4.7	1.0
AUG											
14...	1315	2.6	272	6.4	10.0	10	100	79	35	4.1	.8

DATE	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
JUL											
12...	2	.0	1.5	34	0	28	2.2	79	1.9	.1	3.8
AUG											
14...	2	.0	2.3	31	0	25	20	82	2.6	.1	4.3

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
JUL										
12...	161	145	.22	.83	.21	.010	.03	30	0	60
AUG										
14...	157	148	.21	1.10	.43	.020	.06	--	1	60

DATE	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
JUL										
12...	2	3	1	2	0	420	390	30	6	1
AUG										
14...	0	2	--	3	4	1500	800	700	0	4

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)
JUL										
12...	60	20	40	.5	1	4	0	1	140	20
AUG										
14...	290	20	270	.5	0	5	0	--	140	30

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01594934 - SF SAND RN NR WILSON, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)
OCT , 1979											
16...	1100	--	125	5.7	--	9.0	0	--	41	38	--
APR , 1980											
09...	1130	19	138	6.7	17.0	9.0	--	9.7	57	30	.1
MAY											
07...	0930	2.7	150	6.1	14.0	13.5	--	9.4	60	56	.1
SEP											
10...	0845	.93	--	6.8	11.0	15.2	--	9.5	--	--	--

DATE	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT , 1979											
16...	--	13	2.1	.5	3	.0	.9	3	40	1.2	.1
APR , 1980											
09...	5.0	19	2.4	4.6	15	.3	1.2	27	43	1.2	.1
MAY											
07...	5.0	19	3.0	3.4	11	.2	1.0	4	53	1.3	.1
SEP											
10...	--	--	--	--	--	--	--	--	280	--	--

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT , 1979											
16...	4.3	69	65	.09	--	.61	--	.010	.03	--	--
APR , 1980											
09...	3.1	103	94	.14	5.28	--	.61	--	--	--	--
MAY											
07...	4.3	98	91	.13	.71	--	.55	--	--	--	--
SEP											
10...	--	478	--	.65	1.20	--	--	--	--	0	10

DATE	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)
OCT , 1979										
16...	--	--	--	780	380	400	--	--	620	0
APR , 1980										
09...	--	--	--	9000	9000	40	--	--	490	150
MAY										
07...	--	--	--	600	590	10	--	--	550	10
SEP										
10...	70	30	10	920	920	0	3600	10	490	10

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
OCT , 1979										
16...	620	--	--	--	--	--	--	--	--	--
APR , 1980										
09...	340	--	--	--	--	6.2	--	236	12	--
MAY										
07...	540	--	--	--	--	--	28	--	--	7.00
SEP										
10...	480	580	.00	0	70	--	--	--	--	2.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01594935 - NF SAND RN AT MOON RIDGE, MD

DATE	TIME	PH FIELD (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SULFATE DIS- SOLVED (MG/L AS SO4)
SEP								
10...	0845	6.8	11.0	15.2	9.5	478	.65	280

DATE	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)
SEP									
10...	0	10	70	30	10	920	920	0	3600

DATE	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
SEP								
10...	10	490	10	480	580	.00	0	70

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01594936 - NF SAND RN NR WILSON, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
JUL 12...	1000	.60	220	6.9	17.5	3	95	87	27	6.7	.8
AUG 14...	1030	1.4	154	6.1	17.0	5	53	48	15	3.8	.6

DATE	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
JUL 12...	2	.0	.8	10	0	8	2.0	88	1.6	.1	4.8
AUG 14...	2	.0	1.0	6	0	5	7.6	50	.7	.1	5.0

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
JUL 12...	155	136	.21	.25	.14	.000	.00	30	0	50
AUG 14...	91	81	.12	.34	.33	.000	.00	--	3	70

DATE	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
JUL 12...	4	1	1	4	0	870	760	110	5	3
AUG 14...	0	0	--	7	3	910	670	240	0	5

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)
JUL 12...	560	0	570	.5	3	7	0	1	120	20
AUG 14...	650	0	680	.5	0	8	0	--	60	40

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01594936 - NF SAND RN NR WILSON, MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)
OCT , 1979											
16...	1030	--	88	4.8	--	9.0	0	--	27	26	--
APR , 1980											
09...	1230	24	53	5.0	17.0	9.5	--	9.4	21	20	.1
MAY											
07...	1015	4.0	78	4.9	15.5	10.5	--	8.8	33	32	.1
SEP											
10...	1030	1.2	--	6.0	14.0	15.9	--	8.3	--	--	--

DATE	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT , 1979											
16...	--	7.5	2.1	.5	5	.0	.6	1	29	1.1	.1
APR , 1980											
09...	5.0	5.4	1.8	.4	4	.0	.8	1	20	.7	.0
MAY											
07...	5.0	9.0	2.5	.6	4	.0	.6	1	32	.9	.1
SEP											
10...	--	--	--	--	--	--	--	--	48	--	--

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)
OCT , 1979										
16...	4.6	50	47	.07	--	.61	--	.000	.00	--
APR , 1980										
09...	3.6	50	37	.07	3.24	--	.71	--	--	--
MAY										
07...	4.1	58	54	.08	.63	--	.58	--	--	--
SEP										
10...	--	104	--	.14	.34	--	--	--	--	0

DATE	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
OCT , 1979										
16...	--	--	--	--	480	230	250	--	--	340
APR , 1980										
09...	--	--	--	--	1500	1300	220	--	--	290
MAY										
07...	--	--	--	--	340	190	150	--	--	310
SEP										
10...	10	30	10	10	1300	950	350	3400	10	370

DATE	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
OCT , 1979										
16...	0	350	--	--	--	--	--	--	--	--
APR , 1980										
09...	10	280	--	--	--	--	9.9	25	1.6	--
MAY										
07...	0	310	--	--	--	--	2.1	--	--	--
SEP										
10...	0	380	78	.00	0	6	--	--	--	10.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01594942 - SAND RN AT WILSON, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)
NOV , 1979											
15...	1330	6.1	148	4.8	2.5	3.5	11.6	56	56	.3	15

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV , 1979											
15...	17	3.4	1.7	6	.1	.9	0	62	1.2	.1	5.1

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV , 1979										
15...	106	95	.14	1.75	2500	2010	490	610	30	580

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01594960 - BUFFALO C AT BAYARD,WV

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)
APR , 1980										
09...	1500	89	374	4.5	16.5	11.0	9.2	160	160	.9
MAY										
07...	1130	27	812	3.5	18.0	12.0	9.9	370	370	1.4
SEP										
10...	1600	6.4	--	4.0	19.0	19.8	8.0	--	--	2.8

DATE	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
APR , 1980										
09...	45	55	6.0	.8	1	.0	.9	0	170	1.0
MAY										
07...	70	130	12	1.2	1	.0	.9	0	380	.9
SEP										
10...	131	--	--	--	--	--	--	--	1100	--

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)
APR , 1980										
09...	.2	5.3	292	291	.40	70.2	.69	--	--	--
MAY										
07...	.2	6.1	641	542	.87	46.7	.52	--	--	--
SEP										
10...	--	--	1750	--	2.38	30.2	--	0	<10	9

DATE	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
APR , 1980										
09...	--	--	9200	4500	4700	--	--	670	20	650
MAY										
07...	--	--	7000	1400	5600	--	--	800	0	910
SEP										
10...	10	10	30000	0	31000	18000	20	5100	5000	70

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR , 1980									
09...	--	--	--	--	3.9	--	78	19	--
MAY									
07...	--	--	--	--	--	11	--	--	13.0
SEP									
10...	180	.00	0	30	--	--	--	--	49.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01594965 - NYDEGGER RN AT GORMAN ,MD.

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
APR , 1980												
10...	1330	26	72	6.5	10.0	7.5	10.9	.0	.0	11	19	56
MAY												
07...	1245	8.6	78	6.5	20.5	13.5	10.2	.1	5.0	17	22	55
SEP												
10...	1730	1.5	158	6.7	17.0	16.2	8.9	.0	.0	--	48	104

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)
APR , 1980											
10...	.08	3.93	--	--	--	--	--	1000	970	30	--
MAY											
07...	.07	1.28	--	--	--	--	--	550	500	50	--
SEP											
10...	.14	.42	0	10	7	20	10	280	220	60	6100

DATE	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR , 1980											
10...	--	20	0	20	--	--	--	--	27	1.9	--
MAY											
07...	--	170	40	130	--	--	--	--	--	--	--
SEP											
10...	10	90	0	90	140	.00	0	100	--	--	3.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01594975 - GLADE RN AT STEYER, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV , 1979 15...	1530	10	110	--	2.0	3.5	12.2	.0	.0	31	24	65
APR , 1980 09...	1700	79	63	6.4	14.0	10.5	9.4	.1	5.0	11	42	88
SEP 09...	1530	2.7	--	6.8	24.5	16.2	9.0	--	--	--	53	125

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	COAL IN BOTTOM MATE-RIAL (GM/KG)
NOV , 1979 15...	.09	1.75	370	320	50	100	10	90	--	--	--
APR , 1980 09...	.12	18.8	2100	2000	70	170	80	90	59	13	--
SEP 09...	.17	.91	340	290	50	20	10	10	--	--	2.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01595225 - LAUREL RN AT RILEY RD, NR STEYER, MD.

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
APR									
10...	1200	43	107	6.5	10.0	6.5	11.3	--	--
MAY									
07...	1500	18	165	6.6	19.0	13.0	10.0	--	--
SEP									
11...	1430	2.1	316	6.9	17.5	13.0	9.9	130	100

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)
APR									
10...	.1	5.0	--	--	--	--	--	--	17
MAY									
07...	--	--	--	--	--	--	--	--	17
SEP									
11...	.0	.0	34	10	4.0	6	.2	1.1	24

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
APR								
10...	38	--	--	--	72	--	.10	8.36
MAY								
07...	58	--	--	--	114	--	.16	5.54
SEP								
11...	110	1.4	.1	5.2	191	180	.26	1.08

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)
SEP , 1980										
11...	1	0	100	0	10	10	50	20	1	10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01595225 - LAUREL RN AT RILEY RD. NR STEYER,MD.

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
APR 10...	710	620	90	--	--	--	150	40	110
MAY 07...	540	410	130	--	--	--	120	40	80
SEP 11...	310	210	100	5600	0	10	40	20	20

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR 10...	--	--	--	--	--	--	--	--	14	1.6	--
SEP 11...	1800	.1	.00	0	0	0	30	80	--	--	4.00

01595250 - LOSTLAND RN AT LOSTLAND RN RD NR TASKER CORNER

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
APR , 1980 10...	1030	60	89	5.9	10.0	6.5	11.4	.1	5.0	3	37	74
MAY 07...	1630	17	132	6.2	16.0	13.0	9.8	.1	5.0	7	53	106
SEP 11...	1645	2.4	256	6.2	16.5	13.6	9.6	.0	.0	--	96	158

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)
APR , 1980 10...	.10	12.0	--	--	--	--	--	620	560	60	--
MAY 07...	.14	4.87	--	--	--	--	--	440	410	30	--
SEP 11...	.21	1.02	0	10	9	20	10	170	110	60	11000

DATE	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR , 1980 10...	--	250	30	220	--	--	--	--	23	3.7	--
MAY 07...	--	230	10	220	--	--	--	--	--	--	--
SEP 11...	20	180	0	180	90	.00	0	140	--	--	16.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01595275 - ABRAM C AT RTE 50 BRIDGE NR MOUNT STORM ,WV

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
APR , 1980												
08...	1530	45	382	3.8	10.0	10.0	10.0	130	130	.7	35	34
SEP												
09...	1200	8.0	584	3.2	22.5	17.1	9.1	--	--	1.1	52	--

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
APR , 1980												
08...	11	4.2	6	.2	1.4	0	150	4.5	.2	6.5	259	219
SEP												
09...	--	--	--	--	--	--	330	--	--	--	526	--

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR , 1980												
08...	.35	31.5	1500	570	930	2700	0	2700	.7	13	1.6	--
SEP												
09...	.72	11.4	790	250	540	6400	100	6300	--	--	--	1.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01595495 - WOLFDEN RN AT KITZMILLER, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV , 1979												
16...	1400	5.3	108	6.4	4.0	7.0	10.7	.0	.0	5	110	165
APR , 1980												
09...	1145	65	49	5.1	18.0	9.0	10.2	.1	5.0	3	20	48
SEP												
09...	1330	.94	152	5.3	22.0	16.2	8.2	.0	.0	--	51	90

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	COAL IN BOTTOM MATE-RIAL (GM/KG)
NOV , 1979											
16...	.22	2.36	220	150	70	130	0	140	--	--	--
APR , 1980											
09...	.07	8.42	3900	3900	50	390	190	200	159	28	--
SEP											
09...	.12	.23	390	280	110	220	0	220	--	--	15.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01595550 - THREE FORKS RN AT VINDEX,MD.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)
APR , 1980										
09...	1330	101	168	4.2	19.0	10.0	13.9	34	34	.3
MAY										
06...	1530	17	312	2.8	22.0	14.5	9.0	55	55	.9
SEP										
09...	1500	1.9	830	2.3	23.0	17.5	8.6	--	--	3.3

DATE	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
APR , 1980										
09...	15	9.1	2.8	3.8	19	.3	1.2	0	41	7.2
MAY										
06...	45	14	4.8	4.1	14	.2	.9	0	76	7.4
SEP										
09...	160	--	--	--	--	--	--	--	270	--

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
APR , 1980										
09...	.1	4.6	88	78	.12	24.0	1.4	--	--	--
MAY										
06...	.2	7.0	139	124	.19	6.57	1.0	--	--	--
SEP										
09...	--	--	454	--	.62	2.33	--	0	10	8

DATE	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
APR , 1980										
09...	--	--	5700	4600	1100	--	--	270	40	230
MAY										
06...	--	--	5300	1700	3600	--	--	270	0	280
SEP										
09...	10	18	23000	3000	20000	43000	10	980	870	110

DATE	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	COAL IN BOTTOM MATE-RIAL (GM/KG)
APR , 1980									
09...	--	--	--	--	2.5	--	71	19	--
MAY									
06...	--	--	--	--	2.8	49	--	--	3.00
SEP									
09...	180	.00	0	30	--	--	--	--	390

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01595810 - FOLLY RN NR BARNUM, WV

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
APR , 1980 09...	1630	44	88	7.3	16.5	10.0	10.1	.1	5.0	24	22

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
APR , 1980 09...	63	.09	7.48	960	940	20	110	80	30	43	5.1

01595900 - PINEY SWAMP RN AT HAMPSHIRE,WV

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
APR 11...	1400	22	578	3.2	20.5	12.0	10.3	--	--
MAY 06...	1330	11	825	2.6	26.5	16.0	8.9	230	230
SEP 12...	1130	.84	1710	2.0	18.0	14.4	9.9	580	580

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
APR 11...	1.7	84	--	--	--	--	--	--	0
MAY 06...	2.2	109	61	19	3.6	3	.1	1.6	0
SEP 12...	8.1	402	150	51	11	4	.2	2.7	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
APR 11...	210	--	--	--	406	--	.55	24.1	--
MAY 06...	300	1.4	.2	15	505	419	.69	15.3	.92
SEP 12...	910	1.7	.5	38	1410	1230	1.92	3.20	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01595900 - PINEY SWAMP RN AT HAMPSHIRE,WV

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)
SEP , 1980 12...	2	0	50	3	10	80	20	10	100	20

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
APR 11...	9700	2500	7200	--	--	--	1200	0	1200
MAY 06...	11000	1600	9400	--	--	--	1500	0	1500
SEP 12...	43000	0	50000	23000	4	20	3700	0	4100

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR 11...	--	--	--	--	--	--	--	4.4	--	62	3.7	--
MAY 06...	--	--	--	--	--	--	--	4.5	49	--	--	7.00
SEP 12...	310	.1	.00	1	0	820	30	--	--	--	--	200

01596200 - L SAVAGE R NR AVILTON, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)
NOV , 1979 15...	0915	1.4	35	8.0	-.5	3.5	12.1	.0	.0	3

DATE	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV , 1979 15...	9.1	26	.04	.10	600	410	190	100	10	90

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01596600 - BIG RN NR SWANTON, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKA-LINITY (MG/L AS CACO3)
NOV , 1979										
15...	1200	11	64	6.7	4.0	5.5	12.4	.0	.0	2

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV , 1979										
15...	13	39	.05	1.16	50	40	10	10	0	10

01597100 - MIDDLE F NR SWANTON, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
NOV , 1979												
15...	1600	6.6	74	6.7	4.0	6.5	11.2	--	--	.0	.0	--
APR , 1980												
10...	1430	98	61	7.0	11.0	8.0	11.8	19	13	--	--	4.3
SEP												
10...	1200	2.1	52	6.1	17.0	16.5	9.3	--	--	.0	.0	--

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV , 1979												
15...	--	--	--	--	--	0	15	--	--	--	40	--
APR , 1980												
10...	1.9	1.3	12	.1	1.2	6	15	1.2	.0	5.8	46	39
SEP												
10...	--	--	--	--	--	--	12	--	--	--	46	--

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	COAL IN BOTTOM MATE-RIAL (GM/KG)
NOV , 1979											
15...	.05	.71	80	70	10	10	0	10	--	--	--
APR , 1980											
10...	.06	12.2	340	330	10	20	20	2	9	2.4	--
SEP											
10...	.06	.26	60	50	10	10	10	0	--	--	8.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01597980 - AARON RN AT BLOOMINGTON, MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
NOV , 1979												
15...	1500	1.0	1400	3.8	5.0	6.0	12.0	640	640	1.3	65	150
APR , 1980												
10...	1100	16	613	3.3	14.5	8.5	11.0	230	230	.9	45	59
SEP												
10...	1530	.64	2360	2.6	22.0	17.5	8.1	--	--	1.2	57	--

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
NOV , 1979												
15...	64	11	6	.2	2.0	1	730	2.6	.4	9.3	1080	982
APR , 1980												
10...	20	3.1	3	.1	1.5	0	250	1.3	.2	7.2	403	353
SEP												
10...	--	--	--	--	--	--	1500	--	--	--	2240	--

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979												
15...	1.47	2.92	5200	3100	2100	4400	0	4500	--	--	--	--
APR , 1980												
10...	.55	18.3	7500	4300	3200	1500	100	1400	2.8	60	2.7	--
SEP												
10...	3.05	3.87	990	390	600	7300	0	7600	--	--	--	17.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01598750 - WINEBRENNER RN AT MIDLOTHIAN,MD.

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICPOMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
APR									
08...	1130	8.0	385	3.8	13.0	9.5	11.2	--	--
SEP									
11...	0915	.06	752	3.9	13.0	13.9	8.4	270	270

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)
APR									
08...	1.1	55	--	--	--	--	--	--	0
SEP									
11...	.3	15	66	26	15	11	.4	3.1	2

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
APR								
08...	140	--	--	--	247	--	.34	5.34
SEP								
11...	260	52	.3	17	533	449	.72	.09

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)
SEP , 1980										
11...	1	0	100	2	10	120	9	30	10	20

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
APR									
08...	500	210	290	--	--	--	4600	0	5000
SEP									
11...	390	260	130	8700	3	30	7700	0	7800

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR											
08...	--	--	--	--	--	--	--	--	5	.11	--
SEP											
11...	980	.1	.00	0	0	0	780	60	--	--	120

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01598770 - GEORGES CR AT OCEAN, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
NOV , 1979												
15...	1010	4.3	280	7.2	3.0	2.0	11.5	.0	.0	9	52	154
APR , 1980												
08...	1315	22	345	6.4	14.5	9.5	9.1	.1	5.0	21	83	257

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)
NOV , 1979											
15...	.21	1.79	390	320	70	950	0	1000	--	--	--
APR , 1980											
08...	.35	15.3	580	550	30	1900	200	1700	3.5	22	1.3

01598775 - WOODLAND C AT OCEAN, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)
NOV , 1979										
15...	1045	.60	112	7.7	3.0	2.0	13.8	.0	.0	31

DATE	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV , 1979										
15...	22	68	.09	.11	1500	1480	20	10	0	10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01598820 - NEFF RN AT MIDLAND, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
APR , 1980												
08...	1415	13	172	5.8	12.0	9.0	12.3	.2	10	2	52	126
SEP												
11...	1100	1.1	463	4.3	18.0	16.3	10.0	.2	13	--	190	332

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)
APR , 1980											
08...	.17	4.42	--	--	--	--	--	800	750	50	--
SEP											
11...	.45	.99	0	10	20	60	30	7000	6900	100	4700

DATE	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	COAL IN BOTTOM MATE-RIAL (GM/KG)
APR , 1980											
08...	--	420	0	420	--	--	--	--	15	.53	--
SEP											
11...	60	1300	0	1300	1100	.00	0	230	--	--	17.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01598870 - KOONTZ RN AT LONACONING, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
APR , 1980											
08...	1515	13	347	7.5	13.5	9.5	10.3	--	51	96	276
SEP											
11...	1245	.60	792	7.0	20.0	18.6	8.3	4.7	--	320	612

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)
APR , 1980											
08...	.38	9.69	--	--	--	--	--	770	760	10	--
SEP											
11...	.83	.99	0	10	1	40	20	250	240	10	6000

DATE	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR , 1980											
08...	--	290	40	250	--	--	--	--	24	.84	--
SEP											
11...	40	400	50	350	1100	.00	0	190	--	--	27.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01598980 - MILL RN AT MORRISON, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
NOV									
15...	1140	4.9	635	4.1	3.0	5.0	12.5	280	280
APR									
08...	1620	19	533	3.8	12.5	9.0	10.8	220	220
SEP									
11...	1400	1.0	1457	2.4	23.0	17.3	9.2	730	--

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)
NOV									
15...	.4	20	74	23	1.1	1	.0	1.2	0
APR									
08...	.6	30	56	19	1.0	1	.0	1.3	0
SEP									
11...	2.7	134	190	61	1.6	0	.0	2.0	2

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
NOV									
15...	290	1.0	.2	8.0	447	404	.61	5.91	.25
APR									
08...	220	.9	.1	7.5	417	313	.57	21.4	.69
SEP									
11...	820	.8	.3	15	1220	857	1.66	3.29	--

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)
SEP , 1980										
11...	2	0	100	2	10	10	7	20	30	10

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV									
15...	8300	5500	2800	--	--	--	1000	0	1000
APR									
08...	5500	3300	2200	--	--	--	1300	100	1200
SEP									
11...	19000	16000	13000	11000	7	10	1800	0	1800

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01598980 - MILL RN AT MORRISON, MD

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR 08...	--	--	--	--	--	--	--	1.9	26	1.3	--
SEP 11...	930	.1	.00	0	0	250	20	--	--	--	21.0

01599600 - NEW CREEK AT KEYSER, W VA

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
NOV , 1979 15...	1510	35	190	9.1	3.0	7.0	12.0	.0	.0	63	22	109
APR , 1980 11...	0945	221	148	7.7	12.0	9.0	11.1	--	--	42	19	91
MAY 06...	1200	99	152	7.9	25.0	15.5	10.1	--	--	50	18	--
SEP 11...	1600	7.3	270	7.6	23.0	19.1	8.5	.0	.0	--	35	166

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)
NOV , 1979 15...	.15	10.4	--	--	--	--	--	30	10	20	--	--
APR , 1980 11...	.12	54.3	--	--	--	--	--	340	300	40	--	--
MAY 06...	--	--	--	--	--	--	--	200	170	30	--	--
SEP 11...	.23	3.27	31	10	6	10	10	230	210	20	6200	10

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979 15...	10	0	10	--	--	--	--	--	--	--	--
APR , 1980 11...	30	20	10	--	--	--	--	--	13	7.8	--
MAY 06...	20	10	10	--	--	--	--	2.3	--	--	--
SEP 11...	10	0	10	270	.00	0	40	--	--	--	2.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01599700 - DEEP HOLLOW AT DAWSON CHURCH, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)
NOV , 1979										
15...	1405	1.5	116	7.5	3.0	7.0	11.5	.0	.0	11

DATE	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV , 1979										
15...	24	71	.10	.29	16000	15970	30	410	400	10

01599800 - MILL RN AT RAWLINGS, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
NOV , 1979												
16...	1035	1.9	111	7.5	5.0	6.5	12.4	42	11	.0	.0	12
APR , 1980												
10...	1025	20	71	7.0	14.0	9.0	11.2	25	7	.1	5.0	6.5
SEP												
11...	1345	.22	165	7.5	22.0	15.7	9.5	--	--	.0	.0	--

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
NOV , 1979											
16...	2.8	2.7	16	.2	1.0	31	17	1.3	.0	7.8	88
APR , 1980											
10...	2.1	1.6	12	.1	1.3	18	17	.9	.0	7.3	50
SEP											
11...	--	--	--	--	--	--	9.2	--	--	--	104

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979											
16...	64	.12	.45	160	130	30	10	5	5	--	--
APR , 1980											
10...	51	.07	2.70	320	290	30	20	20	5	2.4	--
SEP											
11...	--	.14	.06	170	130	40	10	10	0	--	6.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01600500 - WARRIOR RN AT CHESAPTOWN, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV , 1979 16...	0940	3.6	187	8.0	7.0	7.0	12.0	.0	.0	55	20
APR , 1980 10...	1210	36	114	7.4	16.0	9.5	11.2	--	--	34	19
SEP 11...	1200	.49	316	7.6	19.0	16.8	9.8	.0	.0	--	27

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	COAL IN BOTTOM MATE-RIAL (GM/KG)
NOV , 1979 16...	110	.15	1.07	130	110	20	10	0	10	--
APR , 1980 10...	79	.11	7.68	570	540	30	40	20	20	--
SEP 11...	193	.26	.26	150	120	30	10	0	10	10.0

01601100 - WILLS C AT ELLERSLIE, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV 14...	1545	221	100	7.4	8.0	6.5	12.8	--	--
APR 08...	1700	405	75	6.9	13.5	11.0	10.8	33	9
SEP 10...	1000	24	119	7.0	19.0	19.7	8.6	50	16

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
NOV 14...	.0	.0	--	--	--	--	--	--	2
APR 08...	.1	5.0	9.2	2.5	1.8	10	.1	1.2	24
SEP 10...	.0	.0	14	3.7	3.0	11	.2	1.9	34

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
NOV 14...	18	--	--	--	76	--	.10	45.3	--
APR 08...	17	2.3	.0	5.5	63	59	.09	68.9	1.2
SEP 10...	17	3.4	.1	4.4	69	68	.09	4.47	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01601100 - WILLS C AT ELLERSLIE, MD

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)
SEP , 1980										
10...	1	0	50	0	10	10	50	10	2	10

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV									
14...	3000	2970	30	--	--	--	70	60	10
APR									
08...	300	280	20	--	--	--	30	20	10
SEP									
10...	180	130	50	4200	0	30	20	0	20

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	COAL IN BOTTOM MATERIAL (GM/KG)
APR										
08...	--	--	--	--	--	--	--	--	1.3	--
SEP										
10...	960	.1	.00	0	0	0	20	40	--	2.00

01601280 - JENNINGS RN AT BARRELVILLE, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
NOV , 1979												
14...	1715	17	333	6.9	4.0	5.0	13.1	140	100	.0	.0	36
APR , 1980												
08...	1600	62	290	7.5	13.0	11.0	10.6	--	--	--	--	--
SEP												
10...	1330	3.2	483	7.1	20.0	18.3	8.8	--	--	.0	.0	--

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
NOV , 1979												
14...	11	5.7	12	.2	1.4	31	120	6.7	.2	7.9	217	212
APR , 1980												
08...	--	--	--	--	--	27	110	--	--	--	216	--
SEP												
10...	--	--	--	--	--	--	200	--	--	--	344	--

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979												
14...	.30	9.96	590	570	20	440	50	390	--	--	--	--
APR , 1980												
08...	.29	36.2	1000	970	30	420	20	400	3.2	45	7.5	--
SEP												
10...	.47	2.97	210	200	10	90	30	60	--	--	--	5.80

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01601300 - NB JENNINGS RN AT BARRELVILLE, MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)
NOV , 1979											
16...	0840	10	210	6.9	7.0	6.0	13.0	.0	.0	18	48
APR , 1980											
08...	1500	29	162	7.5	15.0	11.0	10.8	--	--	33	41
SEP											
10...	1200	1.3	342	7.1	19.0	16.6	9.0	.0	.0	--	110

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979											
16...	126	.17	3.40	710	690	20	80	10	70	--	--
APR , 1980											
08...	127	.17	9.94	1200	1200	40	130	40	90	1.9	--
SEP											
10...	220	.30	.77	720	720	0	90	10	80	--	8.00

01601420 - HOFFMAN DRAINAGE TUNNEL AT CLARYSVILLE MD.

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)
NOV , 1979											
15...	0845	23	875	6.4	2.0	10.5	10.3	410	360	.0	.0
APR , 1980											
10...	0900	31	730	6.1	10.0	11.0	9.3	380	310	.2	10
SEP											
11...	1000	19	886	5.6	18.0	11.8	8.6	--	--	2.4	117

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
NOV , 1979											
15...	100	39	8.0	6	.2	1.6	49	360	17	.4	11
APR , 1980											
10...	93	36	6.1	3	.1	1.5	72	290	12	.4	9.5
SEP											
11...	--	--	--	--	--	--	--	400	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979											
15...	653	573	.89	40.6	6800	2700	4100	2400	100	2300	--
APR , 1980											
10...	620	495	.84	51.9	1300	1100	170	1600	0	1600	--
SEP											
11...	701	--	.95	36.0	6900	2300	4600	3000	0	3100	56.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

POTOMAC RIVER BASIN--CONTINUED

01601490 - BRADDOCK RN AT NARROWS PARK, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)
NOV , 1979											
14...	1245	33	700	8.1	7.0	7.5	12.7	330	310	.0	.0
APR , 1980											
08...	1400	59	490	7.4	16.0	12.0	10.0	220	170	--	--
SEP											
10...	1430	17	834	7.7	21.0	16.3	9.7	--	--	.0	.0

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
NOV , 1979											
14...	84	28	7.9	8	.2	1.6	20	240	17	.3	7.8
APR , 1980											
08...	56	19	11	10	.3	1.8	52	160	18	.2	7.2
SEP											
10...	--	--	--	--	--	--	--	400	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979											
14...	468	401	.64	41.7	570	570	0	860	0	890	--
APR , 1980											
08...	366	310	.50	58.3	4000	4000	10	480	50	430	--
SEP											
10...	680	--	.92	31.2	810	790	20	660	0	690	9.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MONONGAHELA RIVER BASIN--CONTINUED

03075250 - YOUGHIOGHENY R AT US 219 NR REDHOUSE, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKA-LINITY (MG/L AS CACO3)
NOV , 1979										
15...	1145	12	54	6.8	2.0	3.0	12.2	.0	.0	7

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV , 1979										
15...	7.2	39	.05	1.26	500	350	150	50	0	50

03075340 - YOUGHIOGHENY R AT UNDERWOOD RD NR CRELLIN, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV									
15...	1000	50	59	5.6	1.0	3.0	11.6	--	--
APR									
10...	1430	287	38	6.0	9.0	7.0	10.8	16	0
SEP									
11...	1215	18	74	6.4	18.0	14.3	8.9	28	8

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
NOV									
15...	.0	.0	--	--	--	--	--	--	1
APR									
10...	.1	5.0	4.6	1.0	1.3	14	.1	.9	16
SEP									
11...	.0	.0	8.7	1.5	1.8	12	.1	1.3	20

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
NOV									
15...	6.9	--	--	--	44	--	.06	5.94	--
APR									
10...	7.2	2.3	.0	3.6	36	35	.05	27.9	.89
SEP									
11...	5.0	2.7	.1	4.9	40	38	.11	3.89	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MONONGAHELA RIVER BASIN--CONTINUED

03075340 - YOUGHIOGHENY R AT UNDERWOOD RD NR CRELLIN, MD

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)
SEP . 1980										
11...	1	0	100	0	10	10	90	10	1	10

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV									
15...	460	310	150	--	--	--	40	0	40
APR									
10...	980	400	80	--	--	--	60	20	40
SEP									
11...	750	350	400	2300	2	10	40	0	40

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR												
10...	--	--	--	--	--	--	--	--	3.4	32	25	--
SEP												
11...	310	.1	.00	0	0	0	30	50	--	--	--	1.00

03075350 - CHERRY C NR CRELLIN, MD

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)
NOV . 1979										
15...	0900	21	72	5.9	2.0	3.0	11.6	.0	.0	16

DATE	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV . 1979										
15...	9.1	64	.09	3.63	650	520	130	70	0	70

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MONONGAHELA RIVER BASIN--CONTINUED

03075495 - L YOUGHIOGHENY R AT 3RD ST AT OAKLAND, MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
NOV , 1979												
15...	0800	35	98	5.2	-1.0	3.0	11.8	.0	.0	19	11	76
APR , 1980												
10...	1630	331	58	6.1	9.0	8.0	10.3	.1	5.0	4	10	52
SEP												
11...	1015	17	--	6.3	16.0	14.0	8.2	--	--	--	11	75

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979											
15...	.10	7.18	780	560	220	110	0	110	--	--	--
APR , 1980											
10...	.07	46.5	1600	1500	130	110	--	--	54	48	--
SEP											
11...	.10	3.44	1200	640	560	170	0	180	--	--	2.00

03075550 - HERRINGTON C AT HERRINGTON MANOR RD NR OAKLAND

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
APR , 1980												
11...	0900	68	22	4.7	11.0	7.0	10.8	.1	5.0	1	8.4	23
MAY												
07...	1800	18	19	4.4	11.5	14.5	9.6	.1	5.0	3	7.3	18
SEP												
11...	0830	2.8	27	5.3	7.5	15.5	8.0	.0	.0	--	7.0	34

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)
APR , 1980											
11...	.03	4.22	--	--	--	--	--	410	330	80	--
MAY											
07...	.02	.89	--	--	--	--	--	410	340	70	--
SEP											
11...	.05	.26	0	10	40	10	10	780	520	260	1400

DATE	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR , 1980											
11...	--	120	0	120	--	--	--	--	9	1.7	--
MAY											
07...	--	100	0	100	--	--	--	--	--	--	--
SEP											
11...	10	100	0	100	30	.00	0	30	--	--	2.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MONONGAHELA RIVER BASIN--CONTINUED

03075706 - MUDDY C AT SWALLOW FALLS STATE PARK

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)
NOV , 1979											
14...	1600	30	35	6.8	.5	4.5	11.9	11	10	.0	.0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV , 1979											
14...	3.3	.7	.5	11	.1	.7	1	8.0	1.3	.0	3.9

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV , 1979										
14...	28	21	.04	2.27	270	230	40	40	0	40

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MONONGAHELA RIVER BASIN--CONTINUED

03075900 - CHERRY C NR MCHENRY, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV									
14...	1400	16	190	4.0	2.0	4.0	11.6	--	--
APR									
11...	1100	70	80	4.0	13.0	6.5	11.2	23	22
SEP									
11...	1845	5.7	463	3.1	15.5	16.1	8.8	130	130

DATE	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
NOV									
14...	.5	25	--	--	--	--	--	--	0
APR									
11...	.2	13	6.2	1.9	.5	4	.0	.9	1
SEP									
11...	.6	30	32	12	2.4	4	.1	2.0	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
NOV									
14...	60	--	--	--	97	--	.13	4.19	--
APR									
11...	30	1.0	.1	2.6	52	47	.07	9.83	.34
SEP									
11...	160	1.6	.2	6.5	240	222	.33	3.69	--

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV									
14...	820	130	690	--	--	--	1900	0	2000
APR									
11...	410	90	320	--	--	--	630	0	670
SEP									
11...	1300	300	1000	2900	3	10	3400	0	3500

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)
SEP , 1980										
11...	1	0	100	0	10	10	50	10	10	10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MONONGAHELA RIVER BASIN--CONTINUED

03075980 - CHERRY C NR MCHENRY, MD

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
APR												
11...	--	--	--	--	--	--	--	--	1.5	3	.57	--
SEP												
11...	46	.1	.00	1	0	0	210	20	--	--	--	2.00

03076010 - DEEP CREEK LAKE OUTFLOW

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)
NOV , 1979										
14...	1500	2.4	42	5.9	2.5	4.5	11.1	.0	.0	7

DATE	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV , 1979										
14...	10	28	.04	.18	270	160	110	160	0	160

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MONONGAHELA RIVER BASIN--CONTINUED

03076700 - BUFFALO RN NR FRIENDSVILLE, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV , 1979												
14...	1215	28	90	6.9	4.5	5.0	11.8	.0	.0	4	17	62
APR , 1980												
09...	0920	207	70	6.9	14.0	9.0	11.6	.1	5.0	14	16	57
SEP												
09...	1330	3.3	123	7.2	20.0	17.8	8.9	.0	.0	--	30	71

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	COAL IN BOTTOM MATE-RIAL (GM/KG)
NOV , 1979												
14...	.08	4.69	190	150	40	30	0	30	--	--	--	--
APR , 1980												
09...	.08	31.9	2300	2200	80	160	90	70	5.3	79	44	--
SEP												
09...	.10	.63	170	120	50	10	10	0	--	--	--	2.00

03077925 - NB CASSELMAN R NR GRANTSVILLE, MD

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
NOV , 1979												
14...	1830	30	88	6.3	-.5	5.0	11.4	--	--	.0	.0	--
APR , 1980												
09...	1530	--	65	5.0	16.0	10.0	10.7	20	18	.1	5.0	5.4
SEP												
09...	1800	12	90	6.4	20.0	18.7	8.5	--	--	.0	.0	--

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV , 1979												
14...	--	--	--	--	--	8	19	--	--	--	50	--
APR , 1980												
09...	1.5	1.8	16	.2	1.1	2	19	3.1	.0	2.9	52	39
SEP												
09...	--	--	--	--	--	--	31	--	--	--	60	--

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	COAL IN BOTTOM MATE-RIAL (GM/KG)
NOV , 1979											
14...	.07	4.05	420	260	160	210	20	190	--	--	--
APR , 1980											
09...	.07	--	2500	2400	140	510	210	300	6.4	101	--
SEP											
09...	.08	1.94	760	310	450	70	0	70	--	--	2.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MONONGAHELA RIVER BASIN--CONTINUED

03077945 - SB CASSELMAN R AT JENNINGS, MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)
NOV , 1979										
14...	1700	21	100	7.7	-1.0	5.0	11.0	.0	.0	11

DATE	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV , 1979										
14...	25	62	.08	3.52	180	100	80	100	0	100

03077975 - BIG SHADE RN AT GRANTSVILLE, MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
NOV , 1979												
14...	1600	9.6	140	7.6	1.0	6.0	11.2	.0	.0	7	32	75
APR , 1980												
09...	1445	109	98	6.4	16.5	10.5	10.7	.1	5.0	24	23	67
SEP												
09...	1830	1.9	230	7.3	19.5	17.9	8.3	.0	.0	--	54	146

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
NOV , 1979											
14...	.10	1.94	240	190	50	150	20	130	--	--	--
APR , 1980											
09...	.09	19.7	3700	3600	60	290	130	160	112	33	--
SEP											
09...	.20	.75	410	340	70	50	10	40	--	--	6.00

03078500 - BIG PINEY RN NR SALISBURY, PA

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	ALKALINITY (MG/L AS CACO3)
NOV , 1979										
14...	1930	16	79	7.4	-.5	5.0	11.3	.0	.0	3

DATE	SULFATE DISSOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV , 1979										
14...	10	52	.07	2.25	600	400	200	70	40	30

GROUND-WATER LEVELS

DELAWARE

KENT COUNTY

391026075304901. Local number, ID 55-1.
LOCATION.--Lat 39°10'26", long 75°30'49", Hydrologic Unit 02040207, White Oak Road at Dover.
Owner: City of Dover.
AQUIFER.--Piney Point.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2.5 in (0.06 m), depth 349 ft (106 m), cased to 329 ft (100 m), screened 329 to 349 ft (100 to 106 m).
DATUM.--Altitude of land-surface datum is 20 ft (6.1 m). Measuring point: Top of casing at land-surface datum.
REMARKS.--Water level affected by pumping in the Dover area. Equipped with water-stage recorder Aug. 26, 1969, to current year.
PERIOD OF RECORD.--August 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 67.40 ft (20.54 m) below land-surface datum, May 5, 1970; lowest, 143.0 ft (43.59 m) below land-surface datum, Sept. 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.....	128.9	122.4	.....	122.5	124.9	128.7	130.4	131.8	130.9	136.8	138.8
10	.....	128.4	122.2	.....	123.0	126.2	128.7	131.3	131.2	129.7	137.1	138.9
15	.....	128.1	121.8	.....	123.6	126.5	129.0	131.1	130.9	130.3	138.3	138.9
20	128.9	126.9	121.4	120.7	123.6	127.2	129.3	131.3	130.6	133.2	137.6	138.3
25	129.3	124.6	118.5	121.3	124.0	127.4	130.2	131.2	131.3	135.9	137.5	137.8
EOM	129.5	123.1	117.2	122.1	124.4	128.2	130.7	131.2	131.6	135.9	137.9	137.7

WTR YEAR 1980 MAX a116.5 DEC 30, 1979 MIN 139.2 AUG 16, 17, 1980

a May have been higher for period Dec. 30, 1979, to Jan. 16, 1980.

390935075320001. Local number, JD 14-1.
LOCATION.--Lat 39°09'35", long 75°32'00", Hydrologic Unit 02040207, Division Street at Dover.
Owner: City of Dover.
AQUIFER.--Cheswold.
WELL CHARACTERISTICS.--Drilled former public supply well, diameter 12 in (0.30 m), depth 227 ft (69.2 m) cased to 195 ft (59.4 m), screened 195 to 227 ft (59.4 to 69.2 m).
DATUM.--Altitude of land-surface datum is 35 ft (10.7 m). Measuring point: Top of casing at land-surface datum.
REMARKS.--Water level affected by pumping in the Dover area. Equipped with water-stage recorder Aug. 7, 1972, to current year.
PERIOD OF RECORD.--August 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 81.47 ft (24.83 m) below land-surface datum, Apr. 8, 1980; lowest, 131.4 ft (40.05 m) below land-surface datum, Sept. 2, 1972.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	115.1	113.3	110.4	97.9	85.8	84.5	82.0	84.8	104.0	108.2	114.1	115.8
10	114.7	113.3	109.3	94.8	84.6	85.4	83.1	87.0	104.7	.....	115.1	115.7
15	113.4	114.1	109.8	90.0	87.0	84.6	86.0	96.0	105.5	.....	114.3	115.0
20	113.9	112.3	110.4	88.9	84.2	84.4	83.3	100.0	106.6	.....	114.9	115.4
25	114.0	109.6	107.7	89.8	82.9	85.7	87.2	102.6	107.1	111.8	114.8	115.4
EOM	113.9	111.0	105.8	89.0	83.0	84.5	88.5	102.1	107.7	111.6	115.0	114.8

WTR YEAR 1980 MAX 81.5 APR 8, 1980 MIN 116.1 SEP 6, 1980

390607075331501. Local number, JD 42-3.
LOCATION.--Lat 39°06'07", long 75°33'15", Hydrologic Unit 02040207, 1 mi (1.6 km) south of Camden.
Owner: Delaware Department of Highways and Transportation.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1.25 in (0.03 m), depth 11 ft (3.4 m), well point 8.5 to 11 ft (2.6 to 3.4 m).
DATUM.--Altitude of land-surface datum is about 44 ft (13.4 m). Measuring point: Top of casing at land-surface datum.
REMARKS.--This is a replacement well and is located 2 ft (0.6 m) north of the original well. The measurements published in WSP 1782, for the years 1958-61 for the original well, are doubtful.
PERIOD OF RECORD.--October 1950 to December 1961, August 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.69 ft (0.82 m) below land-surface datum, July 18, 1975; lowest measured, 9.56 ft (2.91 m) below land-surface datum, Oct. 25, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	5.86	DEC 26	6.15	FEB 22	6.11	APR 23	5.24	JUN 23	5.86	AUG 25	6.26
NOV 26	5.96	JAN 24	5.78	MAR 26	5.84	MAY 27	5.42	JUL 23	6.29	SEP 24	7.02

KENT COUNTY--Continued

385041075395601. Local number, MC 51-1.

LOCATION.--Lat 38°50'41", long 75°39'56", Hydrologic Unit 02060008, 1.3 mi (2.1 km) northeast of Adamsville. Owner: Delaware Department of Highways and Transportation.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 19 ft (5.8 m), well point 15 to 19 ft (4.6 to 5.8 m).

DATUM.--Altitude of land-surface datum is about 55 ft (16.8 m). Measuring point: Top of casing at land-surface datum.

REMARKS.--This is a replacement well and is located about 60 ft (18.3 m) north of original well.

PERIOD OF RECORD.--September 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.52 ft (1.38 m) below land-surface datum, July 16, 1975; lowest measured, 15.69 ft (4.78 m) below land-surface datum, Nov. 1, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 9	11.01	DEC 19	10.93	APR 3	10.45	JUN 27	11.95	AUG 15	13.26		
NOV 21	10.31	FEB 20	11.01	MAY 15	10.09	JUL 16	12.50	SEP 10	13.83		

385310075331301. Local number, MD 22-1.

LOCATION.--Lat 38°53'10", long 75°33'13", Hydrologic Unit 02040207, 2.4 mi (3.9 km) west of Williamsville. Owner: Delaware Department of Highways and Transportation.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 17 ft (5.2 m), well point 14 to 17 ft (4.3 to 5.2 m).

DATUM.--Altitude of land-surface datum is about 58 ft (17.7 m). Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--September 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.07 ft (0.33 m) below land-surface datum, July 14, 1975; lowest measured, 11.14 ft (3.40 m) below land-surface datum, Jan. 6, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 9	3.45	DEC 19	3.31	APR 3	2.06	JUN 24	5.80	AUG 11	7.43		
NOV 15	2.25	FEB 20	4.06	MAY 12	3.12	JUL 15	6.42	SEP 11	8.49		

NEW CASTLE COUNTY

393854075415401. Local number, DB 24-10.

LOCATION.--Lat 39°38'54", long 75°41'54", Hydrologic Unit 02040205, 2 mi (3.2 km) south of Ogletown. Owner: Delaware Department of Highways and Transportation.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 24 ft (7.3 m), well point 21 to 24 ft (6.4 to 7.3 m).

DATUM.--Altitude of land-surface datum is about 77 ft (23.5 m). Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.33 ft (1.32 m) below land-surface datum, Oct. 6, 1978; lowest measured, 17.43 ft (5.31 m) below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	9.55	FEB 28	9.70	MAY 29	7.70	SEP 11	12.10				
JAN 3	9.38	APR 8	6.93	JUL 28	10.58						

NEW CASTLE COUNTY--Continued

393755075364802. Local number, DC 34-6.

LOCATION.--Lat 39°37'55", long 75°36'48", Hydrologic Unit 02040205, at Delaware National Guard Rifle Range, New Castle.
Owner: Delaware Geological Survey.

AQUIFER.--Upper Potomac.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in (0.15 m) to 43 ft (13.1 m), 2 in (0.05 m) to 190 ft (57.9 m), depth 190 ft (57.9 m), screened 183 to 188 ft (55.8 to 57.3 m).

REMARKS.--Water level subject to tidal fluctuation. Equipped with water-stage recorder Nov. 11, 1975, to current year.

DATUM.--Altitude of land-surface datum is 28 ft (8.5 m). Measuring point: Top of casing, 2.0 ft (0.61 m) above land-surface datum.

PERIOD OF RECORD.--November 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.30 ft (11.98 m) below land-surface datum, Feb. 2, 1976; lowest, 53.35 ft (16.26 m) below land-surface datum, Mar. 7, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	44.20	.....	42.05	42.50	42.40	42.08	42.66	.....	45.79	45.51	45.22	45.96
10	43.70	.....	43.07	43.59	42.37	42.56	41.63	.....	44.84	44.96	45.23	46.20
15	44.00	.....	42.75	42.85	42.01	43.04	41.33	.....	44.77	45.88	44.90	46.89
20	44.22	42.67	42.36	42.93	42.25	43.15	41.94	.....	45.23	45.04	45.34	46.52
25	.....	42.95	41.92	43.25	43.13	43.56	.....	44.43	45.13	44.59	45.51	45.64
EOM	.....	42.98	42.78	42.00	42.55	42.49	.....	44.90	44.86	45.13	45.99	46.59

WTR YEAR 1980 MAX 40.95 APR 14, 1980 MIN 47.25 SEP 30, 1980

391949075410701. Local number, HB 14-1.

LOCATION.--Lat 39°19'49", long 75°41'07", Hydrologic Unit 02040205, at Prices Corners.
Owner: Delaware Department of Highways and Transporation.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 19 ft (5.8 m), well point 16 to 19 ft (4.9 to 5.8 m).

DATUM.--Altitude of land-surface datum is about 72 ft (21.9 m). Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--October 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.49 ft (0.45 m) below land-surface datum, Apr. 7, 1958; lowest measured, 11.95 ft (3.64 m) below land-surface datum, Aug. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	5.64	DEC 27	5.85	FEB 29	6.27	MAY 19	4.24	JUL 16	5.70	AUG 5	6.32
NOV 14	4.76	JAN 7	5.80	APR 8	3.13	JUN 24	5.02	JUL 29	6.03	SEP 8	7.46

SUSSEX COUNTY

384930075370201. Local number, NC 13-3.

LOCATION.--Lat 38°49'30", long 75°37'02", Hydrologic Unit 02060008, 2.0 mi (3.2 km) northwest of Greenwood.
Owner: University of Delaware.

AQUIFER.--Piney Point.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (0.15 m), depth 630 ft (192 m), cased to 620 ft (189 m), screened 620 to 630 ft (189 to 192 m).

DATUM.--Land surface datum is 62.5 ft (19.1 m) above mean sea level. Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

REMARKS.--Equipped with water-stage recorder Dec. 2, 1970, to current year.

PERIOD OF RECORD.--December 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 69.70 ft (21.24 m) below land-surface datum, Jan. 1, 1971; lowest, 80.16 ft (24.43 m) below land-surface datum, Sep. 19, 20, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	79.31	79.69	79.53	79.39	79.61	79.43	79.31	79.32	79.59	79.57	79.73	.....
10	79.40	79.48	79.66	79.79	79.43	79.43	79.30	79.49	79.47	79.59	79.74	.....
15	79.58	79.50	79.72	79.52	79.59	79.58	79.23	79.52	79.48	79.72	79.74	.....
20	79.50	79.50	79.71	79.56	79.56	79.51	79.47	79.45	79.54	79.79	.....	80.16
25	79.36	79.60	79.27	79.31	79.46	79.33	79.37	79.25	79.69	79.78	.....	80.06
EOM	79.71	79.54	79.50	79.52	79.59	79.26	79.31	79.55	79.45	79.71	.....	80.05

WTR YEAR 1980 MAX 79.04 MAR 21, 1980 MIN a80.16 SEP 19, 20, 1980

a May have been lower for period Aug. 16 to Sept. 18, 1980.

384639075353101. Local number, NC 45-1.
LOCATION.--Lat 38°46'39", long 75°35'31", Hydrologic Unit 02060008, 2.0 mi (3.2 km) south of Greenwood.
Owner: P. H. Cannon.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 in (0.03 m), depth 15 ft (4.6 m), screened 14 to 15 ft (4.3 to 4.6 m).
DATUM.--Altitude of land-surface datum is about 43 ft (13.1 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.
PERIOD OF RECORD.--October 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.67 ft (2.03 m) below land-surface datum, Jan. 30, 1952; lowest measured, 14.66 ft (4.47 m) below land-surface datum, Dec. 11, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	11.11	DEC 18	11.80	APR 2	10.80	JUN 23	12.45	AUG 11	13.10		
NOV 27	11.39	MAR 4	12.24	MAY 12	11.10	JUL 16	14.30	SEP 11	13.53		

384955075192801. Local number, NG 11-1.
LOCATION.--Lat 38°49'55", long 75°19'28", Hydrologic Unit 02040207, 1.2 mi (1.9 km) east of Jefferson Crossroads.
Owner: Delaware Department of Highways and Transportation.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 19 ft (5.8 m), well point 16 to 19 ft (4.9 to 5.8 m).
DATUM.--Altitude of land-surface datum is 24 ft (7.3 m). Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--September 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.12 ft (2.17 m) below land-surface datum, Mar. 7, 1979; lowest measured, 14.64 ft (4.46 m) below land-surface datum, Jan. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	8.62	DEC 18	9.73	APR 7	9.12	JUN 24	10.30	SEP 12	12.32		
NOV 27	9.08	FEB 21	10.35	MAY 16	8.85	AUG 15	11.71				

383730075213501. Local number, PF 24-2.
LOCATION.--Lat 38°37'30", long 75°21'35", Hydrologic Unit 02060010, 1.5 mi (2.4 km) southwest of Stockley.
Owner: Delaware Department of Highways and Transportation.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in (0.10 m), depth 49 ft (14.9 m), cased to 46 ft (14.0 m), screened 46 to 49 ft (14.0 to 14.9 m).
DATUM.--Altitude of land-surface datum is about 50 ft (15.2 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
REMARKS.--Equipped with water-stage recorder Jan. 27, 1970, to current year.
PERIOD OF RECORD.--January 1970 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.01 ft (1.53 m) below land-surface datum, Mar. 7, 1979; lowest, 11.98 ft (3.65 m) below land-surface datum, Sept. 5, 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.05	9.66	8.83	9.17	8.51	9.12	6.98	6.81	8.59	9.46	10.54	11.36
10	10.03	9.62	8.98	9.21	8.64	9.10	7.00	7.36	8.58	9.65	10.79	11.43
15	9.75	8.58	9.00	8.84	8.82	8.63	7.25	7.64	8.80	9.86	11.05	11.51
20	9.65	8.45	9.08	8.58	8.90	8.29	7.54	7.91	9.00	9.92	10.98	11.62
25	9.63	8.54	9.02	8.25	9.00	7.84	7.77	8.00	9.21	10.08	11.00	11.61
EOM	9.71	8.69	9.16	8.29	9.08	7.30	7.11	8.43	9.33	10.35	11.18	11.47

WTR YEAR 1980 MAX 6.74 MAY 3, 1980 MIN 11.62 SEP 20, 1980

e Estimated.

383138075260201. Local number, QE 44-1.
LOCATION.--Lat 38°31'38", long 75°26'02", Hydrologic Unit 02060008, 1.0 mi (1.6 km) east of Whaleys Crossroads.
Owner: Delaware Department of Highways and Transportation.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 25 ft (7.6 m), well point 22 to 25 ft (6.7 to 7.6 m).
DATUM.--Altitude of land-surface datum is about 50 ft (15.2 m). Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--September 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.98 ft (1.52 m) below land-surface datum, Mar. 16, 1979; lowest measured, 12.18 ft (3.71 m) below land-surface datum, Oct. 16, 1962, Sept. 8, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	5.93	DEC 27	6.38	APR 15	5.61	JUL 14	9.31				
NOV 20	5.29	FEB 14	7.01	MAY 12	6.17	AUG 18	10.63				

MARYLAND

ALLEGANY COUNTY

394024078273401. Local number, AL-Ah 1.
LOCATION.--Lat 39°40'24", long 78°27'34", Hydrologic Unit 02070003, on Fifteen Mile Creek, 2.8 mi (4.5 km) southeast of Pratt.
Owner: Green Ridge State Forest.
AQUIFER.--Jennings Formation.
WELL CHARACTERISTICS.--Drilled unused artesian (?) well, diameter 8 in (0.20 m), reported depth 300 ft (91.4 m), measured depth 113 ft (34.4 m), cased to unknown depth, open hole.
DATUM.--Altitude of land-surface datum is 720 ft (219 m). Measuring point: Top of sanitary seal in casing, 0.3 ft (0.09 m) above land-surface datum.
REMARKS.--Water level was deeper than 40 ft (12 m) below land-surface datum on Nov. 19, 1969, and Feb. 12, 1970, when well was being pumped.
PERIOD OF RECORD.--December 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.80 ft (0.55 m) below land-surface datum, May 18, 1978; lowest measured, 22.80 ft (6.95 m) below land-surface datum, July 16, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	3.62	DEC 18	3.40	JAN 23	2.76	APR 15	2.50	JUL 3	4.69		
NOV 20	3.75	JAN 2	3.28	FEB 27	3.39	MAY 28	3.05	AUG 15	4.47		

ANNE ARUNDEL COUNTY

390303076463201. Local number, AA-Cb 1.
LOCATION.--Lat 39°03'03", long 76°46'32", Hydrologic Unit 02060006, on Duvall Bridge Rd., Fort George G. Meade.
Owner: U.S. Army.
AQUIFER.--Patuxent Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 505 ft (153.9 m), cased to 485 ft (147.8 m), screened 485 to 505 ft (147.8 to 153.9 m).
DATUM.--Altitude of land-surface datum is 126 ft (38 m). Measuring point: Top lip of 3-in (0.08 m) extension pipe, 3.35 ft (1.02 m) above land-surface datum.
REMARKS.--Equipped with water-stage recorder during many periods.
PERIOD OF RECORD.--March 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.60 ft (12.37 m) below land-surface datum, May 1, 1962; lowest measured, 79.44 ft (24.2 m) below land-surface datum, Sept. 30, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	74.18	NOV 29	73.82	MAR 14	71.38	MAY 20	70.85	JUL 23	75.65	SEP 17	78.38
NOV 1	74.75	JAN 25	72.09	APR 24	71.45	JUN 19	72.63	AUG 21	76.22		

390423076432001. Local number, AA-Cc 40.
LOCATION.--Lat 39°04'23", long 76°43'20", Hydrologic Unit 02060006, on Rifle Range Rd., Fort George G. Meade.
Owner: U.S. Army.
AQUIFER.--Patapsco Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 238 ft (72.5 m), cased to 208 ft (63.4 m), screened 208 to 238 ft (63.4 to 72.5 m).
DATUM.--Altitude of land-surface datum is 137 ft (42 m) (incorrectly reported as 148 ft (45 m) in 1978 report). Measuring point: Top of recorder platform, 1.0 ft (0.30 m) above land-surface datum.
REMARKS.--Equipped with water-stage recorder Dec. 4, 1959, to July 21, 1960.
PERIOD OF RECORD.--December 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.58 ft (12.98 m) below land-surface datum, Mar. 25, 1961; lowest measured, 49.22 ft (15.00 m), June 2, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	45.72	NOV 29	45.45	MAR 14	45.85	MAY 20	45.18	JUL 23	45.63	SEP 17	46.83
NOV 1	45.59	JAN 25	45.60	APR 24	45.45	JUN 19	45.10	AUG 21	46.30		

BALTIMORE CITY

391617076322001. Local number, 2SSE-1.
LOCATION.--Lat 39°16'17", long 76°32'20", Hydrologic Unit 02060003, near Holabird Avenue and Pumphrey Street, at Fort Holabird, Baltimore.
Owner: City of Baltimore.
AQUIFER.--Patuxent Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in (0.30 m), depth 290 ft (88.4 m), length of casing and position of screen unknown.
DATUM.--Altitude of land-surface datum is 30 ft (9.1 m). Measuring point: Lower lip of discharge pipe, 3.6 ft (1.1 m) above land-surface datum. April 1943 to Nov. 22, 1979, top of casing, 1.8 ft (0.55 m) above land-surface datum.
PERIOD OF RECORD.--1934, April 1943 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.15 ft (13.15 m) below land-surface datum, Sept. 27, 1976; lowest measured, 103.70 ft (31.61 m), Oct. 15, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	67.57	JAN 2	53.55	MAR 7	66.43	JUN 5	69.85	AUG 14	69.57		
NOV 23	70.63	FEB 1	66.65	APR 29	66.70	JUL 10	71.23				

BALTIMORE COUNTY

393102076341801. Local number, BA-Ce 21.
LOCATION.--Lat 39°31'02", long 76°34'18", Hydrologic Unit 02060003, on Paper Mill Rd, about 0.6 mi (1.0 km) west of Jacksonville.
Owner: Baltimore County.
AQUIFER.--Loch Raven Schist (Wissahickon Group), revised.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 10 to 6 in (0.25 to 0.15 m), depth 350 ft (106.7 m), cased to 33 ft (10.1 m), open hole.
DATUM.--Altitude of land-surface datum is 536 ft (163 m). Measuring point: Top of casing, 2 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--November and December 1955, November 1956 through September 1975, July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.60 ft (3.84 m) below land-surface datum, June 23, 1972; lowest measured, 21.54 ft (6.57 m) below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 8	16.63	MAR 17	17.28	JUN 6	16.15	JUL 11	16.83				
JAN 29	16.77	APR 25	14.97	JUN 20	16.17	AUG 19	18.29				

CALVERT COUNTY

381952076270901. Local number, CA-Gd 6.
LOCATION.--Lat 38°19'52", long 76°27'09", Hydrologic Unit 02060006, at the Lord Calvert Yacht Club, about 0.5 mi (0.8 km) northeast of Solomons.
Owner: Calvert Marina.
AQUIFER.--Aquia Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 to 6 in (0.20 to 0.15 m), depth 493 ft (150.3 m), cased to 472 ft (143.9 m), screened 469 to 493 ft (143.0 to 150.3 m).
DATUM.--Altitude of land-surface datum is 10 ft (3.0 m). Measuring point: Top of pump base, 10 ft (3.0 m) above land-surface datum.
REMARKS.--Equipped with water-stage recorder Oct. 19, 1949, to Feb. 25, 1960.
PERIOD OF RECORD.--1942, January 1944, October 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level reported, at land-surface datum, 1942; lowest measured, 58.9 ft (17.95 m) below land-surface datum, Jan. 13, 1944.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	51.66	DEC 17	51.31	JAN 22	50.48	APR 21	49.97	JUL 7	54.15		
NOV 14	51.60	JAN 3	50.37	MAR 11	51.06	JUN 3	50.58	AUG 18	55.90		

MARYLAND--Continued

CARROLL COUNTY

393638076510001. Local number, CL-Bf 1.
LOCATION.--Lat 39°36'38", long 76°51'00", Hydrologic Unit 02060003, on Hillcrest Street, Hampstead.
Owner: Town of Hampstead.
AQUIFER.--Prettyboy Schist (Wissahickon Group).
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), depth 407 ft (124.1 m), cased to about 65 ft (19.8 m), open hole.
DATUM.--Altitude of land-surface datum is 933 ft (284 m). Measuring point: Top of 2-in casing extension, 2.35 ft (0.72 m) above land-surface datum.
REMARKS.--Equipped with water-stage recorder Apr. 15, 1952, to Nov. 7, 1962.
PERIOD OF RECORD.--September and December 1946, April and September 1947, February 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.30 ft (15.94 m) below land-surface datum, May 13, 1952; lowest measured, 76.26 ft (23.24 m) below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	66.08	DEC 27	65.01	JAN 21	64.63	APR 14	63.39	JUL 7	63.27		
NOV 13	61.27	JAN 2	65.34	MAR 3	59.54	JUN 2	61.69				

CHARLES COUNTY

383422077114601. Local number, CH-Cb 7.
LOCATION.--Lat 38°34'22", long 77°11'46", Hydrologic Unit 02070011, at Caffee and Greenslade Roads, about 2.5 mi (4.0 km) southwest of Indian Head.
Owner: U.S. Navy: Naval Ordnance Station.
AQUIFER.--Patapsco Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 to 6 in (0.20 to 0.15 m), depth 400 ft (121.9 m), cased to 400 ft (121.9 m), screened 154 to 167 ft (46.9 to 50.9 m).
DATUM.--Altitude of land-surface datum is 36 ft (11 m). Measuring point: Top of casing at land-surface datum.
REMARKS.--Equipped with water-stage recorder Sept. 21, 1953, to July 8, 1965.
PERIOD OF RECORD.--March and April 1952, August 1953 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.35 ft (17.48 m) below land-surface datum, Apr. 18, 1952; lowest measured, 88.58 ft (27.00 m) below land-surface datum, Oct. 22, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	70.05	DEC 19	74.33	JAN 24	73.10	APR 23	72.24	JUL 9	69.90		
NOV 15	73.58	JAN 2	74.25	MAR 5	73.49	MAY 28	69.52	AUG 19	71.28		

DORCHESTER COUNTY

383346076030301. Local number, DO-Ce 21.
LOCATION.--Lat 38°33'46", long 76°03'03", Hydrologic Unit 02060005, on Shoal Creek about 1.5 mi (2.4 km) southeast of Cambridge.
Owner: Eastern Shore State Hospital.
AQUIFER.--Piney Point Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 to 4.5 in (0.20 to 0.11 m), depth 368 ft (112.2 m), cased to 368 ft (112.2 m).
DATUM.--Altitude of land-surface datum is 12 ft (3.7 m). Measuring point: Top of casing at land-surface datum.
REMARKS.--Equipped with water-stage recorder Aug. 23, 1956, to Nov. 6, 1958, and Sept. 11, 1965, to Oct. 13, 1966.
PERIOD OF RECORD.--August 1914, February 1952, August 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level reported, 14 ft (4.3 m) below land-surface datum, August 1914; lowest measured, 137.49 ft (41.91 m) below land-surface datum, Feb. 8, 1962, affected by pumpage of nearby well.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	73.76	JAN 3	73.26	APR 16	69.99	JUN 25	62.93				
NOV 23	73.74	FEB 28	69.86	MAY 21	64.31	AUG 20	62.52				

MARYLAND--Continued

GARRETT COUNTY

394016078581601. Local number, GA-Ag 1.
LOCATION.--Lat 39°40'16", long 78°58'16", Hydrologic Unit 02070002, in the Savage River valley, 2.5 mi (4.0 km) northwest of Frostburg.
Owner: Town of Frostburg.
AQUIFER.--Pocono Sandstone or Greenbrier Limestone.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), depth 30 ft (9.1 m), cased to unknown depth, open hole.
DATUM.--Altitude of land-surface datum is 2,530 ft (771 m). Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--October 1946 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.71 ft (1.74 m) below land-surface datum, Jan. 14, 1950; lowest measured, 9.37 ft (2.86 m) below land-surface datum, Nov. 24, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	7.13	JAN 2	6.84	FEB 25	6.92	APR 25	6.78	JUN 24	6.81	AUG 25	7.12
NOV 26	6.55	22	6.81	MAR 21	6.54	MAY 26	6.64	JUL 24	6.92	SEP 24	7.36
DEC 26	6.72										

HARFORD COUNTY

392343076161901. Local number, HA-Ed 24.
LOCATION.--Lat 39°23'43", long 76°16'19", Hydrologic Unit 02060003, at Bush River Road and 29th Street, about 2 mi (3.2 km) southeast of Edgewood.
Owner: U.S. Army: Edgewood Arsenal.
AQUIFER.--Patapsco Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 18 to 10 in (0.46 to 0.25 m), depth 149 ft (45.4 m), cased to 120 ft (36.6 m), screened 120 to 135 ft (36.6 to 41.1 m).
DATUM.--Altitude of land-surface datum is 13 ft (4.0 m). Measuring point: Top of casing, 1.15 ft (0.35 m) above land-surface datum.
REMARKS.--Equipped with water-stage recorder Jan. 24, 1950, to June 6, 1961.
PERIOD OF RECORD.--April 1944, September 1949, January 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.24 ft (2.51 m) below land-surface datum, Apr. 13, 1944; lowest measured, 38.40 ft (11.70 m) below land-surface datum, Apr. 23, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	9.04	DEC 14	10.14	JAN 22	9.54	JUN 2	9.36				
NOV 13	9.29	JAN 8	9.77	APR 18	8.98	AUG 20	9.85				

MONTGOMERY COUNTY

390434076573002. Local number, MO-Eh 20.
LOCATION.--Lat 39°04'34", long 76°57'30", Hydrologic Unit 02070010, at State Highway 196 and Fairland Road, Fairland.
Owner: Cities Service Oil Co.
AQUIFER.--Wissahickon Group.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5.6 in (0.14 m), depth 103 ft (31.4 m), cased to 50 ft (15.2 m), open hole.
DATUM.--Altitude of land-surface datum is 410 ft (125 m). Measuring point: West side of bell housing at inside of lip at land-surface datum.
PERIOD OF RECORD.--March 1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.39 ft (1.34 m) below land-surface datum, June 25, 1972; lowest measured, 14.88 ft (4.54 m) below land-surface datum, Sept. 26, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	9.97	JAN 24	10.38	MAR 26	9.46	MAY 23	10.52	JUL 24	12.17	SEP 17	13.45
NOV 26	9.88	FEB 22	11.31	APR 24	10.56	JUN 24	11.90	AUG 26	12.88	SEP 26	13.34
DEC 26	10.74										

MARYLAND--Continued

WASHINGTON COUNTY

393638078001301. Local number, WA-Be 2.

LOCATION.--Lat 39°36'38", long 78°00'13", Hydrologic Unit 02070004, about 1.2 mi (1.9 km) southeast of Big Pool.
Owner: Fort Frederick State Park.

AQUIFER.--Romney Shale.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 42 in (1.07 m), depth 43 ft (13.1 m), cribbed with stone.

DATUM.--Altitude of land-surface datum is 470 ft (143 m). Measuring point: Top of stone sill, 0.8 ft (0.24 m) above land-surface datum.

PERIOD OF RECORD.--December 1949, June 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.90 ft (5.46 m) below land-surface datum, May 15, 1972; lowest measured, 36.92 ft (11.25 m) below land-surface datum, Jan. 11, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	20.39	DEC 18	27.67	JAN 23	28.53	APR 15	23.70	JUL 3	31.65		
NOV 20	25.22	JAN 2	28.00	FEB 27	31.58	MAY 27	27.06	AUG 15	33.54		

WICOMICO COUNTY

382037075310801. Local number, WI-Cf 3.

LOCATION.--Lat 38°20'37", long 75°31'08", Hydrologic Unit 02060007, on Airport Road, about 5 mi (8.0 km) southeast of Salisbury.
Owner: Salisbury Wicomico Airport.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in (0.41 m), depth 109 ft (33.2 m), cased to 90 ft (27.4 m), screened 90 to 108 ft (27.4 to 32.9 m).

DATUM.--Altitude of land-surface datum is 45 ft (14 m). Measuring point: Top of casing, 2.0 ft (0.61 m) above land-surface datum.

REMARKS.--Equipped with water-stage recorder Aug. 2, 1949, to Apr. 11, 1960, and Aug. 29, 1963, to Aug. 20, 1968.

PERIOD OF RECORD.--October 1942, September 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.90 ft (0.58 m) below land-surface datum, May 7, 1958; lowest measured, 13.44 ft (4.10 m) below land-surface datum, Sept. 18, 1947.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	5.21	JAN 3	6.74	APR 9	5.27	JUN 25	7.83				
NOV 20	4.94	FEB 28	6.70	MAY 12	5.92	AUG 20	9.10				

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MULTIPLE STATION LISTING

LOCAL IDENT-I-FIER	STATION NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	DEPTH TO BOT-TOM OF WATER-BEARING ZONE (FT)	DEPTH TO TOP OF WATER-BEARING ZONE (FT)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT-TOM OF SAMPLE INTER-VAL (FT)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. NGVD)
				ANNE ARUNDEL					
CF 134 740171	390121076270501	217PPSC	80-04-10	580	370	590	580	370	40.00
				CALVERT					
BB 28 733721	384331076395202	124PNPN	80-06-27	--	--	170	170	160	130.00
BB 33 732603	384222076380101	125AQUI	80-08-28	--	--	342	342	332	115.00
CA 9	383950076402801	125AQUI	80-08-28	--	--	285	285	196	40.00
CB 26 730673	383837076381001	125AQUI	80-08-28	--	--	420	--	--	120.00
EB 20 730736	382732076355801	124PNPN	80-08-08	--	--	405	405	370	30.00
				GARRETT					
FA 31 732142	391539079254601	324PSVL	80-02-11	1100	2610.00	1130	300	99	90
		324PSVL	80-02-11	965	2610.00	1130	23	0	6.9
		324PVAG	80-02-11	870	2610.00	1130	34	10	11
				MONTGOMERY					
EC 10 732833	390451077245901	231NOXF	79-11-27	--	--	858	--	--	280.00
				PRINCE GEORGES					
BE 32731163	390152076492601	217PTXN	80-06-05	466	360	468	466	441	150.00
				QUEEN ANNES					
EB 110 732979	385751076171603	217PTXN	80-03-04	--	--	2547	--	--	15.00
EB 111 733122	385751076171601	217PPSC	80-02-06	1047	940	1100	1040	954	15.00
EB 112 733223	385751076171602	217PPSC	80-02-14	1710	1640	1710	1702	1650	15.00
EB 113	385748076172001	125AQUI	80-01-15	270	170	220	216	176	13.00
				ST MARYS					
BB 22 733787	382838076470102	124PNPN	80-07-01	--	--	218	218	208	170.00
CA 7	382089076501201	125AQUI	80-08-05	--	--	354	354	334	10.00
CB 19 731873	382426076464302	125AQUI	80-08-05	--	--	388	--	--	80.00
CE 38 732030	382222076304602	125AQUI	80-08-07	--	--	470	470	450	16.00
DD 63 733081	381616076364701	125AQUI	80-07-09	--	--	529	356	346	115.00
DD 62 733786	381616076364703	124PNPN	80-07-01	--	--	358	358	348	115.00

Geologic unit (aquifer):

124PNPN - Piney Point Formation
125AQUI - Aquia Formation
217PPSC - Patapsco Formation
217PTXN - Patuxent Formation
231NOXF - New Oxford Formation
324PSVL - Pottsville Formation
324PVAG - Pottsville-Allegheny Formations, Undifferentiated

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MULTIPLE STATION LISTING

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	DEPTH OF HOLE, TOTAL (FEET)	FLOW RATE (GPM)	FLOW RATE, INSTAN- TANEOUS (GPM)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	HARD- NESS (MG/L AS CACO3)
ANNE ARUNDEL										
CF 134 740171	80-04-10	1380	601	1620	1620	118	6.1	17.0	2	20
CALVERT										
BB 28 733721	80-06-27	--	--	--	--	298	7.5	19.5	2	130
BB 33 732603	80-08-28	--	--	--	--	298	7.1	18.0	0	130
CA 9	80-08-28	--	--	--	--	405	7.2	17.0	0	180
CB 26 730673	80-08-28	--	--	--	--	293	7.4	18.0	0	120
EB 20 730736	80-08-08	--	--	--	--	273	7.5	18.0	0	79
MONTGOMERY										
EC 18 732833	79-11-27	12	858	400	400	729	--	14.5	5	420
PRINCE GEORGES										
ME 32731163	80-06-05	475	468	160	160	25	5.3	15.0	0	2
QUEEN ANNES										
EB 110 732979	80-03-04	--	--	--	--	225	7.2	24.5	--	--
EB 111 733122	80-02-06	1430	1060	65	65	154	6.4	21.0	--	.0
EB 112 733223	80-02-14	1380	1730	62	62	135	6.2	25.0	--	.0
EB 113	80-01-15	240	220	--	30	380	7.4	15.5	5	--
ST MARYS										
BB 22 733787	80-07-01	--	--	--	--	296	7.8	19.0	0	120
CA 7	80-08-05	--	--	--	--	283	8.8	18.0	5	10
CB 19 731873	80-08-05	--	--	--	--	266	7.8	17.5	1	67
CE 38 732030	80-08-07	--	--	--	--	210	8.2	16.0	0	12
DD 63 733081	80-07-09	--	--	--	--	320	7.5	17.0	0	88
DD 62 733786	80-07-01	--	--	--	--	318	7.9	19.0	0	39

MULTIPLE STATION LISTING

LOCAL IDENT- I- FIER	DATE OF SAMPLE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
GARRETT										
FA 31 732142	80-02-11	18	1800	93	45	4.7	200	.6	10	4950
	80-02-11	1.4	26	71	2.4	.5	82	.1	4.5	131
	80-02-11	1.6	95	86	7.1	.7	24	.1	7.5	280

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
FA 31 732142	80-02-11	6.73	.03	.050	.15	4200	2000
	80-02-11	.18	--	--	--	330	310
	80-02-11	.38	--	--	--	450	320

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MULTIPLE STATION LISTING

LOCAL IDENT- I- FIER	DATE OF SAMPLE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
				ANNE ARUNDEL						
CF 134 740171	80-04-10	20	4.1	2.3	.9	8	.1	1.3	0	25
				CALVERT						
BB 28 733721	80-06-27	0	44	4.7	3.1	5	.1	3.9	130	19
BB 33 732603	80-08-28	0	33	11	4.0	6	.2	10	130	12
CA 9	80-08-28	0	39	19	3.0	3	.1	17	180	14
CB 26 730673	80-08-28	0	28	12	4.0	6	.2	13	130	10
EB 20 730736	80-08-08	0	17	8.8	19	30	.9	15	120	13
				MONTGOMERY						
EC 10 732833	79-11-27	280	140	17	39	19	.8	1.0	140	370
				PRINCE GEORGES						
BE 32731163	80-06-05	0	.5	.1	1.7	63	.6	.4	5	2.3
				QUEEN ANNES						
EB 110 732979	80-03-04	17	0	3.6	1.8	36	75	3.9	7.2	13
EB 111 733122	80-02-06	33	21	7.2	3.5	1.9	10	.1	3.1	27
EB 112 733223	80-02-14	41	6	8.6	4.5	3.6	14	.2	6.5	13
EB 113	80-01-15	160	0	43	13	6.5	8	.2	5.6	.8
				ST MARYS						
BB 22 733787	80-07-01	0	30	9.9	4.4	7	.2	9.6	130	18
CA 7	80-08-05	0	2.8	.7	60	89	8.3	5.1	140	7.9
CB 19 731873	80-08-05	0	15	7.1	23	36	1.2	16	120	9.3
CE 38 732030	80-08-07	0	3.3	1.0	48	80	5.0	7.3	94	6.4
DD 63 733081	80-07-09	24	22	8.1	22	30	1.0	19	64	13
DD 62 733786	80-07-01	0	10	3.5	9.8	30	.7	7.7	73	24

MULTIPLE STATION LISTING

LOCAL IDENT- I- FIER	DATE OF SAMPLE	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
		GARRETT			
FA 31 732142	80-02-11	2200	130	20	110
	80-02-11	20	20	10	10
	80-02-11	130	10	0	20

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MULTIPLE STATION LISTING

LOCAL IDENT-I-FIER	DATE OF SAMPLE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)
				ANNE ARUNDEL						
CF 134 740171	80-04-10	.6	.1	8.1	58	59	.08	.00	.110	.34
				CALVERT						
BB 28 733721	80-06-27	2.5	.2	45	166	201	.23	.00	.090	.28
BB 33 732603	80-08-28	.4	.2	15	160	164	.22	.08	.010	.03
CA 9	80-08-28	2.5	.2	47	246	250	.33	.28	.020	.06
CB 26 730673	80-08-28	.3	.2	14	150	160	.20	.01	.010	.03
EB 20 730736	80-08-08	1.0	.4	35	164	182	.22	.01	.020	.06
				MONTGOMERY						
EC 10 732833	79-11-27	10	.2	23	721	605	.98	1.4	.010	.03
				PRINCE GEORGES						
BE 32731163	80-06-05	1.4	.0	7.6	22	17	.03	.06	.010	.03
				ST MARYS						
BB 22 733787	80-07-01	2.1	.3	29	160	182	.22	.04	.060	.18
CA 7	80-08-05	1.0	.3	12	163	174	.22	.01	.120	.37
CB 19 731873	80-08-05	.7	.2	14	150	157	.20	.01	.010	.03
CE 38 732030	80-08-07	2.0	.3	12	123	130	.17	.11	.060	.18
DD 63 733081	80-07-09	1.0	.3	18	91	142	.12	.03	.020	.06
DD 62 733786	80-07-01	1.8	.3	28	164	129	.22	.01	.030	.09

MULTIPLE STATION LISTING

LOCAL IDENT-I-FIER	DATE OF SAMPLE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	IODIDE, DISSOLVED (MG/L AS I)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3)
				QUEEN ANNES						
EB 110 732979	80-03-04	13	.2	.00	14	128	136	.17	.00	.00
EB 111 733122	80-02-06	.9	.2	.01	9.7	61	75	.08	.01	.04
EB 112 733223	80-02-14	1.1	.2	.01	12	75	75	.24	.02	.09
EB 113	80-01-15	2.5	.2	--	14	209	194	.28	--	--

LOCAL IDENT-I-FIER	DATE OF SAMPLE	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)
EB 110 732979	80-03-04	.00	.00	--	.00	.25	.25	--	.030	10
EB 111 733122	80-02-06	.01	.03	--	.02	.02	.04	--	.160	0
EB 112 733223	80-02-14	.01	.03	--	.03	.38	.41	--	.020	40
EB 113	80-01-15	--	--	.01	--	--	--	.030	--	--

LOCAL IDENT-I-FIER	DATE OF SAMPLE	ANTIMONY, DISSOLVED (UG/L AS SB)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)
EB 110 732979	80-03-04	0	0	40	0	40	9	2	0	0
EB 111 733122	80-02-06	0	1	100	1	10	5	10	3	3
EB 112 733223	80-02-14	0	2	300	0	30	1	3	0	2
EB 113	80-01-15	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MULTIPLE STATION LISTING

LOCAL IDENT-I-FIER	DATE OF SAMPLE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
			ANNE ARUNDEL				
CF 134 740171	80-04-10	14000	0	16000	200	0	230
			CALVERT				
BB 28 733721	80-06-27	1300	920	380	30	0	30
BB 33 732603	80-08-28	290	100	190	10	10	0
CA 9	80-08-28	160	60	100	10	10	0
CB 26 730673	80-08-28	660	160	500	10	0	10
EB 20 730736	80-08-08	420	110	310	10	10	0
			MONTGOMERY				
EC 10 732833	79-11-27	70	0	140	30	0	30
			PRINCE GEORGES				
BE 32731163	80-06-05	470	120	350	20	10	10
			ST MARYS				
BB 22 733787	80-07-01	1100	760	340	50	10	40
CA 7	80-08-05	110	100	10	10	10	0
CB 19 731873	80-08-05	150	130	20	10	0	10
CE 38 732030	80-08-07	2900	1700	1200	20	10	10
DD 63 733081	80-07-09	220	80	140	10	0	10
DD 62 733786	80-07-01	270	170	100	10	10	0

MULTIPLE STATION LISTING

LOCAL IDENT-I-FIER	DATE OF SAMPLE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)
				QUEEN ANNES						
EB 110 732979	80-03-04	1800	910	890	0	10	70	0	70	.1
EB 111 733122	80-02-06	12000	0	14000	0	10	240	0	240	.1
EB 112 733223	80-02-14	4700	1500	3200	1	10	210	10	200	.1
EB 113	80-01-15	1000	370	630	--	--	10	8	2	--

LOCAL IDENT-I-FIER	DATE OF SAMPLE	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)
EB 110 732979	80-03-04	0	0	0	0	120	20
EB 111 733122	80-02-06	0	1	0	0	200	20
EB 112 733223	80-02-14	1	1	0	0	300	70
EB 113	80-01-15	--	--	--	--	--	--

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54x10^{1}	millimeters (mm)
	2.54x10^{-2}	meters (m)
feet (ft)	3.048x10^{-1}	meters (m)
miles (mi)	1.609x10^{0}	kilometers (km)
	Area	
acres	4.047x10^{3}	square meters (m^2)
	4.047x10^{-1}	square hectometers (hm^2)
	4.047x10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590x10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785x10^{0}	liters (L)
	3.785x10^{0}	cubic decimeters (dm^3)
	3.785x10^{-3}	cubic meters (m^3)
million gallons	3.785x10^{3}	cubic meters (m^3)
	3.785x10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832x10^{1}	cubic decimeters (dm^3)
	2.832x10^{-2}	cubic meters (m^3)
cfs-days	2.447x10^{3}	cubic meters (m^3)
	2.447x10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233x10^{3}	cubic meters (m^3)
	1.233x10^{-3}	cubic hectometers (hm^3)
	1.233x10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832x10^{1}	liters per second (L/s)
	2.832x10^{1}	cubic decimeters per second (dm^3/s)
	2.832x10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309x10^{-2}	liters per second (L/s)
	6.309x10^{-2}	cubic decimeters per second (dm^3/s)
	6.309x10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381x10^{1}	cubic decimeters per second (dm^3/s)
	4.381x10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072x10^{-1}	megagrams (Mg) or metric tons